

# **Environmental Assessment and the Greening of NAFTA**

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**To my parents.**



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## Frequently used acronyms

(key acronyms marked in bold)

BECC.....	Border Environmental Cooperation Commission
Border Agreement.....	(US-Mexican) Border Environment Cooperation Agreement (BECA)
CEAA.....	Canadian Environmental Assessment Agency
.....	Canadian Environmental Assessment Act <sup>1</sup>
<b>CEC.....</b>	<b>(North American) Commission for Environmental Cooperation</b>
CEC.....	(US) Council on Environmental Quality
CLC.....	(North American) Commission for Labor Cooperation
CUSFTA.....	Canada-US Free Trade Agreement
EA.....	environmental assessment (summarizing various types of environmental assessment)
<b>EIA.....</b>	<b>environmental impact assessment (project level)</b>
et al.....	et aliter (and others)
etc.....	et cetera
EPA.....	(US) Environmental Protection Agency
FTAA.....	Free Trade Area of the Americas
GAC.....	Governmental (Advisory) Committee
GATT.....	General Agreement on Tariffs and Trade
GNP.....	gross national product
IBWC.....	International Boundary and Water Commission
IJC.....	International Joint Commission
INE.....	(Mexican) National Institute of Ecology (Instituto Nacional de Ecología)
<b>JPAC.....</b>	<b>Joint Public Advisory Committee</b>
LGEEPA.....	(Mexican) General Law of Ecological Balance and Environmental Protection (Ley General del Equilibrio Ecológico y Protección Ambiental)
“La Paz Agreement”.....	(US-Mexican) Border Environment Agreement

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<sup>1</sup> CEAA is the general abbreviation for both, the Agency and the Act. CEAA is thus not used as abbreviation within the thesis, though partly in the references.

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NAC.....	National Advisory Committee
<b>NAAEC.....</b>	<b>North American Agreement on Environmental Cooperation</b>
NAALC.....	North American Agreement on Labor Cooperation
NADBank.....	North American Development Bank
<b>NAFTA.....</b>	<b>North American Free Trade Agreement</b>
<b>NAFTA EA.....</b>	<b>ongoing environmental assessment of the North American Free Trade Agreement</b>
NEPA.....	(US) National Environmental Policy Act
NGO.....	non-governmental organization
OECD.....	Organization for Economic Cooperation and Development
PROFEPA.....	(Mexican) Federal Attorney General for Environmental Protection (Procuraduría Federal de Protección al Ambiente)
<b>SEA.....</b>	<b>strategic environmental assessment for policies, plans programs</b>
SEMARNAT.....	(Mexican) Secretariat of Environment and Natural Resources (Secretaría de Medio Ambiente y Recursos Naturales)
SPP.....	(North American) Security and Prosperity Partnership
<b>transboundary EIA.....</b>	<b>transboundary environmental impact assessment</b>
UNECE.....	United Nations Economic Commission for Europe
US.....	The United States of America
US\$.....	US Dollar
US-CAFTA-DR.....	Central America-Dominican Republic-United States Free Trade Agreement
WTO.....	World Trade Organisation

# 1 Introduction

Since the 1990s, international trade agreements have continuously and increasingly gained importance. Trade liberalization – in its most extensive form leading to free trade – aims at stimulating economic exchange between the partner countries, and encompasses industrialized as well as less-developed nations. Trade in this context not only includes material goods, but also intangible products such as intellectual property rights or educational services. In addition to the economic ramifications, the environmental aspects of international trade have been a political topic for approximately 15 years. Recent trade agreements, including the Central America-Dominican Republic-United States Free Trade Agreement (US-CAFTA-DR) or, on the global level, the negotiations of the World Trade Organization (WTO), integrate environmental concerns into their negotiations and even partly into their final compacts.

The focus of this dissertation is the North American Free Trade Agreement (NAFTA), an accord that came into force in 1994 between Canada, the US and Mexico<sup>2</sup> and was widely regarded as the first trade agreement to incorporate extensive environmental cooperation among its actors. Public resistance towards NAFTA demonstrated the concern of civil society, whereas constituting the first time that such concern became especially publically on a wider scale. In the beginning of the 1990s, as a political reaction to this public outcry, the signatory countries created the North American Agreement on Environmental Cooperation (NAAEC) and with it the Commission for Environmental Cooperation (CEC, here also referred to as the “Commission”). At the time NAFTA entered into force, it was regarded as the one of the greenest free trade agreement ever signed. The NAAEC incorporates different governance levels, mainly the CEC and the nation states as international players, but also entities on the subnational and civil society levels, thereby creating environmental multi-level governance in North America.

A closer analysis of NAAEC’s design and practical implementation during the past 15 years, however, shows that both institutions – the NAAEC and the CEC – mainly support general environmental cooperation between the three signatory countries and are only partly regarded as environmental adjuncts to NAFTA. The setting of NAAEC, its implementation, and its mandates to various levels of governance provide a unique backdrop for the development of a scientific theory of greening trade, both generally and specifically regarding NAFTA.

The instrumental focus of the dissertation centers on different approaches to environmental assessment, which is one of the few instruments explicitly mentioned in the NAAEC. Environmental assessment is usually practiced in relation to projects –

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<sup>2</sup> In this dissertation, the countries are always presented in a North-South order. In a legal context, the terms “Canada”, “the US” and “Mexico” usually refer to the federal level addressing tasks, jurisdictions and influences of the respective federal government.

dubbed “project environmental impact assessment”, or project EIA – and to policies, plans and programs – called “strategic environmental assessment”, or SEA. In recent years, the latter has also included the assessment of trade agreements (“trade environmental assessment”, or trade SEA). These instruments and their results are discussed nationally, internationally and within a transboundary context, respectively. In the context of this dissertation the term “environmental assessment” comprises the different types of the instrument and does not refer to the US definition of the term, which refers to a part of the elements of the environmental assessment procedure under the auspices of the National Environmental Policy Act (NEPA).

In general, environmental assessment (EA) identifies the actual or potential impacts caused by a project, policy, plan or program (here upon also summarized as activity) and proposes how negative impacts can be mitigated during the implementation of the activity. EA is internationally known and used as a preventative tool in policymaking, and since its creation in the early 1970s, has been continuously developed in its methodology, the content and objects under evaluation, and its approaches to international cooperation.

This dissertation takes a closer look at three types of environmental assessment that are included in NAAEC and that cover different fields of trilateral environmental cooperation. This study explicitly refers to project EIA and SEA for policies, plans and programs, both in a domestic and a transboundary context, as well as to the environmental assessment of NAFTA (NAFTA EA). It examines these three types of EA by extending the theory of Marks and Hooghe on multi-level governance in terms of its institutional background as well as of its practical implementation. The existing frame of NAAEC and the different components of environmental assessment are also used to create new linkages between types of EA. This dissertation also develops the main criteria for utilizing environmental assessment in the greening of NAFTA, an essential effort since the various types of environmental assessment were not originally designed to green the trade agreement, but partly to simply evaluate its impact and partly without any reference at all.

The key objective of this paper, therefore, is to develop the concept of NAFTA’S GREEN IMPACT and thus to contribute to the greening of NAFTA by suggesting ways in which the results of the multiple forms of EA can be interlinked and thus be used to green, and not only to assess, NAFTA policies. This paper thereby goes beyond the existing environmental assessment of trade by developing new, unique links between the three different types of environmental assessment and by addressing its potential to green NAFTA. This concept of NAFTA’S GREEN IMPACT originates from the NAAEC and is thus based on environmental multi-level governance which plays a central role in North American environmental protection and cooperation and thus in the types of environmental assessment.

The instrument of environmental assessment originated and was implemented empirically in environmental science; its current political development and implementation, however, has occurred in the field of political science. This dissertation

adheres, therefore, to an environmental-political perspective and focuses less on the economic angle which would explicitly address the trade agreement.

## 1.1 Objective, Hypothesis and Research Questions

The NAAEC was the first environmental agreement that was created as a parallel accord to a free trade agreement, namely NAFTA. Three components of the environmental agreement are central to this discussion: the general environmental cooperation created through NAAEC, the environment-trade aspect engendered by the accord, and the inclusion of different types of environmental assessment into the NAAEC. The current general conditions of the NAAEC form the basis of this Ph.D. thesis:

- The economic agreement NAFTA has a mandatory environmental side agreement, the NAAEC.
- NAAEC includes three levels of environmental assessment: the national level, the transboundary level and the NAFTA level.
- Both the NAAEC and the types of environmental assessment are related to different governance levels in terms of environmental cooperation.

Within this context, this dissertation aims to:

**analyze the perspectives for environmental assessment as part of the NAAEC, including the past, present and possible future of the instrument, with a special focus on greening NAFTA based on multi-level governance.**

The dissertation is based on:

**the hypothesis that the types of environmental assessment as part of the NAAEC contribute to the greening of NAFTA.**

The scientific analysis is based on five central research questions:

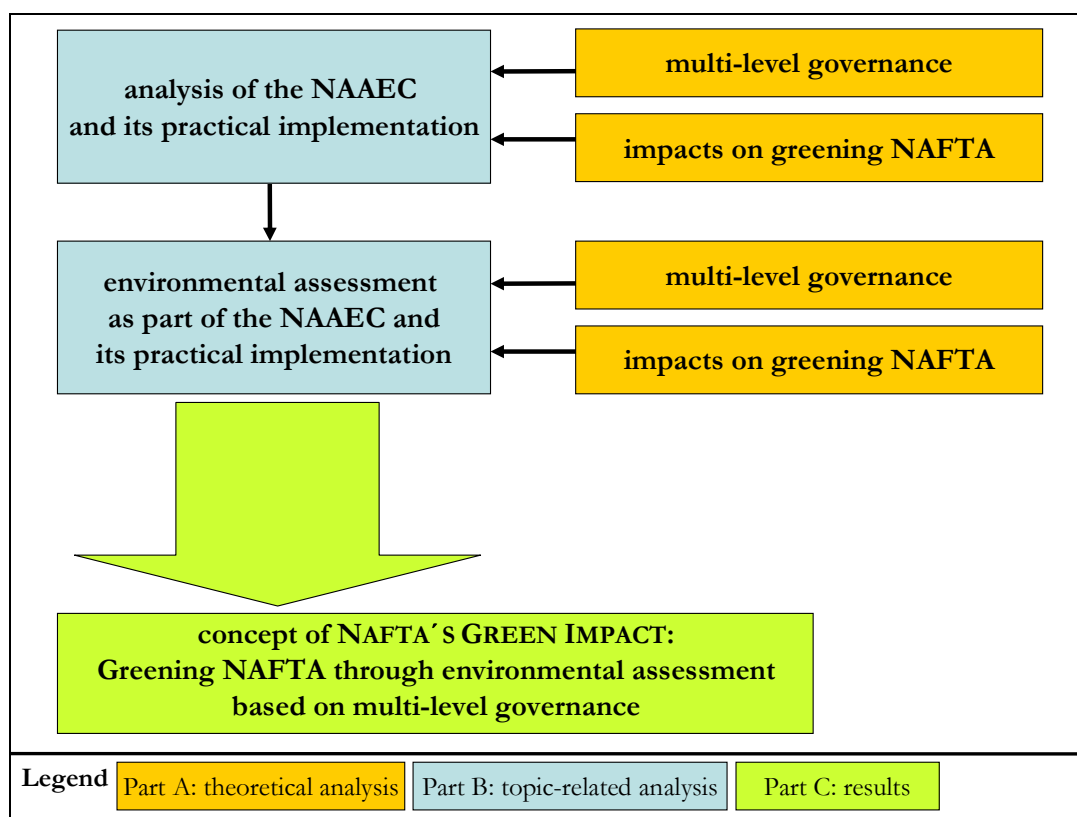
- How is environmental assessment integrated into the NAAEC and the work of the CEC, and what kind of challenges, achievements and opportunities regarding environmental assessment exist when implementing the objectives that are mentioned in the NAAEC?
- How are the forms of environmental assessment related to trade liberalization under NAFTA?
- How is multi-level governance as described in the theory of Marks and Hooghe (multi-level governance type I and II) represented in the NAAEC and in the different types of environmental assessment?
- How are selected criteria for greening NAFTA reflected in the NAAEC and in the types of environmental assessment?
- How could the types of environmental assessment support the greening of NAFTA through a cooperation of the different governance levels?

In the first step, the analysis focuses on multi-level governance and impacts on greening

NAFTA in the NAAEC and its implementation to create a general understanding of the approach. In the second step, the analysis then evaluates the instrument of environmental assessment and its relation to multi-level governance and greening NAFTA. The results from both analytic parts then feed into the concept of NAFTA'S GREEN IMPACT. Figure 1 provides an overview of the content of the dissertation and illustrates its scientific approaches.

Figure 1: The scientific scheme of the dissertation

(see Chapter 1.4)



The dissertation does not question the general idea of trade liberalization; rather, it analyzes the positive contribution that the different types of environmental assessment could make to the greening of NAFTA, through precautionary environmental protection and the circumvention of possible environmental degradation caused by the trade agreement.

## 1.2 State of Research

The dissertation research addresses the gap in scientific knowledge concerning the instrument of environmental assessment and multi-level governance with respect to the greening of NAFTA. This field of research is comparatively new and has received only marginal scientific attention. Key elements of the research are \*CEC, \*NAAEC, \*transboundary EIA, \*NAFTA EA, \*domestic environmental assessment (project EIA and SEA for policies, plans and programs) in a NAAEC-related context and

\*environmental multi-level governance.

Relevant background information was available on project environmental impact assessment (EIA) and on strategic environmental assessment for policies, plans and programs (SEA) in general and in international comparisons primarily including information on Canada and the US. For this dissertation, publications were mainly chosen from Dalal-Clayton and Sadler (2005), Sadler (2005) and Therivel (2004) on different aspects of SEA and Wood (2003) and Tweedie (2006) in a trilateral comparison of the instrument, as well as Instituto Nacional de Ecología/ SEMARNAP (2000) and Podhora (2003) with a special focus on Mexico. Additionally, the homepages of the responsible domestic institutions provided valuable sources of information, for example, current legal texts and regulations, as well as further information in the section “Frequently Asked Questions” that elucidated special national characteristics of the instrument. This information provided insights into domestic environmental assessment as one of the starting point of this dissertation.

Regarding the other topics of the dissertation, the analysis of the state of research identified the following five main gaps in scientific investigation.

**First, the NAAEC and the CEC receive very little attention in the literature,** especially when compared to the economic agreement NAFTA<sup>3</sup>. Existing research covers the scope, challenges and opportunities of the NAAEC in general, for example, in Markell, Knox (2003), Kirton, Maclaren (2002) and Alfie Cohen (no date/advance copy), all of which examined the CEC in general, compared NAAEC to environmental cooperation of the US-CAFTA-DR (Schatan, Muñoz Villareal 2005), and analyzed a possible transfer of the NAAEC to the Free Trade Area of the Americas (Deere, Esty 2002). Additionally, Hogenboom (1999) explicitly focused on the environmental aspects of the NAFTA debate in Mexico.

The literature is thus little concerned with environment-trade linkages or different approaches to environmental assessment. In Germany, a few law dissertations have focused completely or partly on NAAEC, for example, Gehring (2007) on international approaches to trade assessments with NAFTA as one example, Sander (2001) on environmental aspects and trade liberalization in the context of NAFTA, among other agreements, and Rojas Amandi (1998) on environmental protection and NAFTA<sup>4</sup>.

Even in scientific journals, the information on the NAAEC and the CEC is comparatively scarce, and is mainly concerned with their general mandates and their influence on the individual nation state and focuses less on specific tasks that originated

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<sup>3</sup> Markell, Knox 2003: 2. As a present example, the German Staatsbibliothek, one of the leading German libraries, lists 79 books published between 2000 and 2009 with the term “NAFTA”. The terms “Commission for Environmental Cooperation” and “North American Agreement on Environmental Cooperation” without any limitation in years have three and two hits, respectively (last search January 15, 2010).

<sup>4</sup> For a list of the libraries consulted see chapter 1.3.



from the NAAEC and are part of the work of the CEC<sup>5</sup>. Topic-related articles in a wider context is, among others, Blair (2003) on the citizen submission procedure<sup>6</sup>. Basic additional information, as well as literature reviews, can be found as working and information papers on homepages of research institutes and NGOs and associations that focus on trade and environment in their work, for example, the International Relation Center (e.g. Alanis 2005), Centro Mexicano de Derecho Ambiental (e.g. Guadarrama 2005) and Unisfera International Center (e.g. Mayrand, Paquin 2007, 2003). The authors refer to different aspects of environmental cooperation and the tasks of the Commission itself rather than to environmental assessment.

The extensive analysis of NAAEC and the CEC, of multi-level governance and especially of the instrument of environmental assessment can, therefore, be regarded as a central element in this dissertation. It provides relevant and innovative information by analyzing the NAAEC and the CEC with a special focus on multi-level governance and environmental assessment as a specific instrument, regarding both the legal background and the practical implementation.

**Second, an extensive comparison of the different approaches to environmental assessment in the NAAEC could not be identified in the existing scientific literature.** Currently, the three approaches are analyzed rather separately from each other.

Domestic environmental assessment, including project EIA and SEA for policies, plans and programs, is seen rather as a domestic issue than as a part of international and NAAEC matters, respectively. The literature identified often regards project EIA and SEA as two separate parts of the instrument and gives less emphasis to their interconnections. Additionally, the literature does not refer to the NAAEC context.

Though the transboundary EIA is to a certain extent part of the domestic EIA, analytic information regarding the North American approaches can also be regarded as scarce

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<sup>5</sup> Special focus on the following journals: American Political Science Review, Canadian Public Policies, Environmental Impact Assessment Review, Environmental Policy and Governance, Environmental Science and Policy, European Environment, European Journal of Political Research, European Journal of Political Theory, Europolis (2008-2009), Global Environmental Politics (2001-2009), Impact Assessment and Project Appraisal, International Environmental Agreements: Politics, Law and Economics, International Political Science Review, Journal of Environment and Development, Journal of Environmental Assessment Policy and Management, Latin American Perspectives (2000-2006), Latin American Research Review, Mexican Studies (2000-2007), Organization and Environment, Political Theory, Science and Policy for Sustainable Development (all last search December 2008, final update November 2009; search for articles mainly between 2000 and 2009), additionally supported through searches in isi knowledge, google scholar.

Key items for general research as well as research related to Canada, U.S. and Mexico were the North American Agreement on Environmental Cooperation/NAAEC, Commission for Environmental Cooperation /CEC, multi-level governance, North American Free Trade Agreement/ NAFTA + environment, Security and Prosperity Partnership/ SPP, environmental assessment/ environmental impact assessment, strategic environmental assessment, trade assessment, impact assessment.

<sup>6</sup> Additionally in January 2011, Betsill (2007) was identified via Scopus. The article discusses the role of the CEC within multi-level governance in the climate change debate. Thereby, she positions the CEC with respect to international approaches and does not cover the approach of this dissertation.

and are provided, for example, by Bastmeijer, Koivurova (2008) and Garver, Podhora (2008, and it must be noted that this article was partly based on research related to the dissertation). Craik (2007, who also published his article in Bastmeijer, Koivurova 2008), and partly Tweedie (2006) provided basic information; however, here again, the focus is more on legal issues and less explicitly on NAAEC and the CEC.

Scientifically speaking, the NAFTA EA mainly belongs to the content of the evaluation of trade agreements and is thus a special part of the SEA. It is therefore to be found in relation to ex-ante trade assessments, as in Gibson, Walker (2001) and Carpentier (2006) with view the CEC in the special issue of the Impact Assessment and Project Appraisal Journal (IAPA) on trade impact assessment (2006, e.g. with Voituriez et al., Blanco, and McCormick et al., Carpentier) and in institutional analyses such as the OECD (Ed.) (2000) on trade assessment.

In addition, articles by Kirkpatrick and George (2008)/ George and Kirkpatrick (2007) and the information and documents provided in the section “Trade” of the homepage of the European Commission (2010: <http://ec.europa.eu/trade/> + links to the respective information) considered the ex-ante Sustainability Impact Assessment of Trade Agreements of the European Commission as a counterpart to the ex-post environmental assessment of the NAFTA, and served as a valuable support in relating the North American to the system of the European Commission.

The analysis of the dissertation thereby provides scientific information concerning a comparison of the environmental assessment within the context of the NAAEC and the governance levels. It includes the historical development and the practical implementation of the three types of environmental assessment related to the NAAEC and their individual challenges.

**Third, “[t]here has been little systematic research on the effects on the environment of regional free trade agreements.”** (Altmann 2002: XVI), a quotation that even in 2009 can still be regarded as true. Further research concerning existent scientific activities is therefore explicitly required. The case studies of the NAFTA EA that are conducted under the responsibility of the CEC form a relevant scientific basis for dissecting NAFTA’s environmental impacts. Critical analysis of the results of the studies and their political implementation, however, is underdeveloped, as literature thus far has mainly focused on methodology, and a relation to further approaches to environmental assessment has been barely discussed.

In addition to the articles on the NAFTA EA that were just mentioned, Millis (2004) submitted to the CEC an extensive overview of NAFTA and its environment-trade linkages, an overview which shows that the articles identified cover general aspects of this topic rather than an analysis of specific NAAEC-related activities, often date back to before or around the year 2000, and frequently reveals a law background rather than an explicitly environmental or political background.

Further specific and general supporting information on the environment-trade linkage could be found in working papers of research institutes in the three NAFTA countries,

for example, at the International Relations Center, Unisfera, Centro Mexicano de Derecho Ambiental and the Red Mexicana de Acción Frente el Libre Comercio<sup>7</sup>.

Furthermore, in order to understand the general challenges, additional literature on trade and the environment and on aspects of environmental cooperation as part of trade liberalization was consulted, for example and aspects of environmental cooperation as part of trade liberalization are mainly Altmann (2002), Khan (2002), Pfahl (2000) and Cordonier et al. (1999), but also institutional publications as OECD (2008, 2000)/ OECD Environment Directorate et al. (2008) and IISD (2005, 2000).

With the concept of NAFTA'S GREEN IMPACT, the dissertation presents a suggestion that could contribute to both systematically identifying and simultaneously mitigating negative and improving environmental impacts of trade agreements.

**Fourth, the interrelationships among the different types of environmental assessment and trade liberalization in general, and NAFTA specifically, are barely discussed in the literature.** The most direct interrelation can be found in trade-specific types of environmental assessment, as covered by the authors who were presented in a previous paragraph. Literature with an explicit relation among trade liberalization and project EIA and SEA for policies, plans and programs in a domestic and transboundary context could be identified during the research.

The dissertation, however, proves an existing relation using the example of two case studies and presents suggestions for a provision of information and for a contribution to the mitigation of negative and an improvement of the positive environmental impacts of NAFTA in particular and trade agreements in general.

**Fifth, a theoretical discussion neither of the NAAEC nor of the different types of environmental assessment related to the outline in the theory of multi-level governance provided by Marks and Hooghe (2004)/ Hooghe and Marks (2003), with their differentiation between governance type I and type II, could be identified during the research.** The focus on multi-level governance can be found especially in the European Union and on the international level, for example, in Rosenau (2004), Benz, Dose (2004) and Benz et al./ Benz (2007) (see Chapter 2.1 for further literature)<sup>8</sup>.

The dissertation, therefore, is intended to prompt discussion on environmental multi-level governance in North America in general, including the NAAEC in relation to all three countries and with regard to environmental assessment as a specific instrument.

Due to the comparatively negligible existing research results, the gathering of general background information, as well as an extensive analysis of the NAAEC and

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<sup>7</sup> Further general analyses and comments on NAFTA's environmental impacts apart from the explicit NAFTA EA can be found e.g. in Gallagher (2004), Arroyo Picard (2003), Villamar (2001), Salazar, Carlsen (2001), Hufbauer et al. (2000), Pastor (1993). The approaches of these authors, however, played a less relevant role in the dissertation as they were not part of the studies of the NAFTA EA.

<sup>8</sup> See footnote 6.

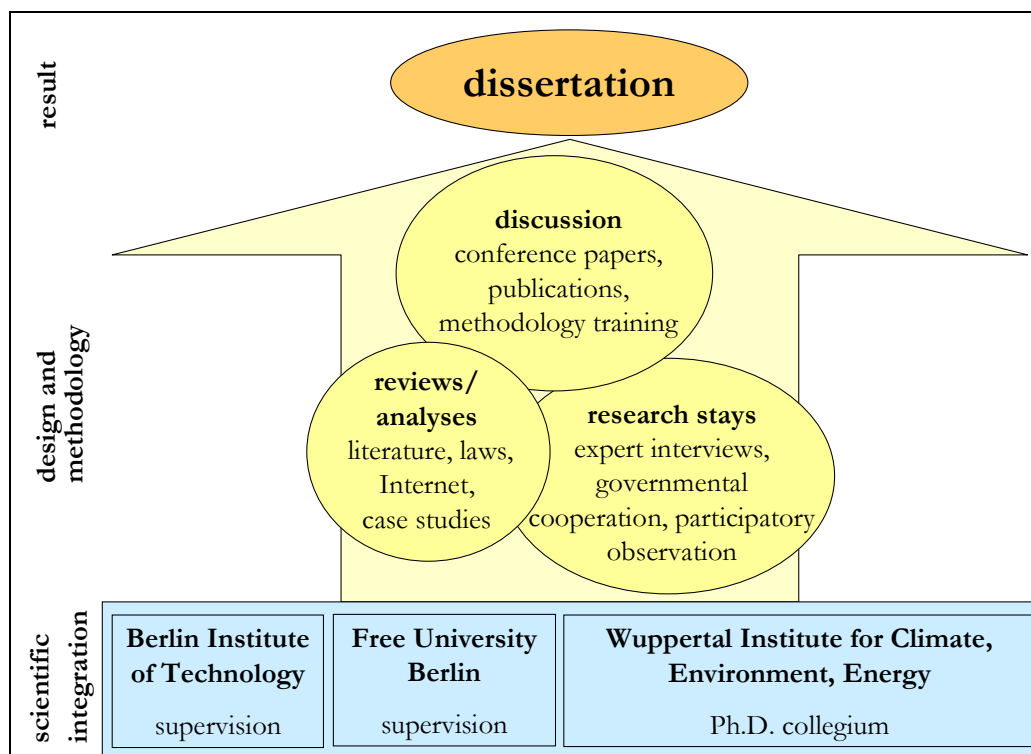
environmental assessment, their relation to multi-level governance, and their impacts on greening NAFTA, forms an essential part of the dissertation. The innovative elements of the dissertation are linked to the chapters of the dissertation in Figure 3 (see Chapter 1.4).

### 1.3 Research Design and Methodology

The analysis of this dissertation is based on the view of the professional field of landscape planning. In Germany, conducting environmental assessment is often part of landscape planning, and research in the field contributes to the development of the instrument. Multi-level governance likewise finds its origins in the field of political science. This dissertation, therefore, is located at the nexus between landscape planning and political science, in accordance with the professional outlook of the author, who holds a diploma in landscape planning (German equivalent to a master's degree).

The research design and methodology were selected while taking into account the limited information that was available on the research topic. Figure 2 illustrates the mixture of research design and methodology (see Chapter 1.3.1, 1.3.2).

Figure 2: Research design and methodology of the dissertation



#### 1.3.1 Research Design

The dissertation was written in the Environmental Assessment and Policy Research Group at the Technische Universität Berlin (Berlin Institute of Technology) headed by Prof. Dr. Johann Köppel and by guest professors Prof. Dr. Wolfgang Wende and Prof.

Dr. Elke Bruns. The dissertation was part of the Environmental Policy Research Center at the Freie Universität Berlin (Free University Berlin), chaired by Prof. Dr. Miranda Schreurs. The research was also embedded in the Ph.D. collegium “Ecology and Fairness in the World Trade Regime” at the Wuppertal Institute for Climate, Environment and Energy, headed by Prof. Dr. Wolfgang Sachs.

The thesis was written between January 01, 2006 and February 15, 2010 (with preparatory work since 2005). The extensive internet research ended in December 2008. The research design consisted of three key elements: research stays, scientific discussion and scientific integration, which are described in detail in the following paragraphs.

### **Research schedule**

During the first approximately eight months, January 2006 to September 2006, the key internet research took place on the general aspects of the NAAEC, environment-trade linkages, the CEC in general and the transboundary EIA, the first focus on the types of environmental assessment (see Chapter 1.3.2). A first draft of the Chapters 3 Basic Facts, 4 Environmental Assessment in the NAFTA countries and 5 NAFTA was developed. In addition, several German experts could be interviewed mainly concerning transboundary EIA to prepare the research stay in Mexico. Additionally, the first draft of Chapter 1 was developed as guidance for the following Ph.D. research.

In May 2006, a first scientific discussion of transboundary EIA in North America within the context of this research took place at the annual conference of the International Association for Impact Assessment (Podhora 2006). The instrument itself, but also domestic and country-specific approaches to EIA, could be discussed and analyzed here. In addition, it was possible to meet experts from the NAFTA countries during the conference. Here, first general expert meetings supported the understanding of the CEC as an institution and paved the way for the first draft of Chapter 6 on the Commission.

Between October and December 2006, during a research stay in Mexico, information on the practical work of the CEC and country-specific information on Mexico and the US-Mexican border area was gathered through expert interviews. The research supported the understanding of the interaction between the Commission and the nation states, challenges of binational transboundary cooperation using the example of the US and Mexico and on Mexico's role as an economically less developed country in comparison to its two Northern neighbors.

In January and February 2007, these results were evaluated and discussed in Germany with supervisors and in the Ph.D. collegium. The Mexican interviews were analyzed to identify knowledge gaps that could be filled during a stay in Canada. In addition, special training in expert interviews of the Böll Foundation at the Wuppertal Institute for Ph.D. candidates supported the analysis.

From March to May 2007, the author had the opportunity to do a research stay at the CEC to learn about its mandate and tasks, its programs in general and the variety of environmental assessment in particular. In addition, country-specifics for Canada could be identified and formal interviews and informal meetings partly evaluated during the

stay. Chapter 6 on the Commission could be updated, as well as Chapter 4 on environmental assessment was filled, to which national comments on Mexico and Canada were added. The need for greening NAFTA became especially obvious as the missing topic-related activities under the CEC became particularly obvious. Additionally, the role of the various governance levels could be identified. Both led to a first draft of Chapter 2 on multi-level governance and the greening of NAFTA.

In June, the CEC's citizen submission procedure as one of the key elements and central characteristics of the Commission was presented at the annual conference of the International Association for Impact Assessment using Canadian environmental impact assessment as an example (Podhora 2007b). Here, the role of the CEC, the interaction of international and national tasks within the CEC, and the influence of civil society were discussed. In addition, the author initiated the special issue on Transboundary EIA in the journal for Impact Assessment and Project Appraisal (Garver, Podhora, published in November 2008) and contributed a paper with a North American focus on the instrument, co-written with Geoffrey Garver, a former staff member of the CEC. Selected results of the Ph.D. research were discussed in detail here, particularly regarding their perspective on a topic-related issue.

Until the end of 2007, the analysis of interviews with Canadian experts were finalized, the final structure and key elements of the dissertation were defined, and Chapters 4, 5, 6 and 7 were designed and updated. A first draft of Chapter 7 environmental assessment within the NAAEC could be elaborated upon based on the new information on transboundary EIA and NAFTA EA gathered during the Canadian research stay. In addition, in November and December, the research stay in the US was prepared and scheduled for January, but then had to be cancelled at short notice.

Based on the information on the CEC and environmental assessment in the NAAEC that was gathered in expert interviews and through additional contacts to European experts, the Wuppertal Paper was published in November 2007 as part of the publication series for the Ph.D. collegium (Podhora 2007a). This paper focuses on trade impact assessment with a comparison between the NAFTA EA and the European Sustainability Impact Assessment. Selected results of this paper with a focus on Mexico were presented at the final symposia of the collegium in April 2008 in a common workshop on NAFTA's trade impacts in Mexico with Dr. Monika Dittrich (Podhora 2008). The results of this workshop and the subsequent public discussion then led to a paper co-written with Dr. Monika Dittrich and Prof. Dr. Boris Braun (Dittrich, Podhora, Braun 2009), published in June 2009. This scientific discussion supported the selection, analysis and description of cases studies for the dissertation, a process which mainly took place in 2008.

In 2008, the information provided by the interviews and the literature review was evaluated in relation to different concepts of multi-level governance. During this evaluation, the type I and II theory of Marks and Hooghe emerged as an appropriate theoretical background for the dissertation. Based on the expert interviews and general and specific information on the impacts of trade on the environment, the key

suggestions for the greening of NAFTA were developed. Chapter 2 was designed and specified the theory applied to the analyses of Chapters 6 and 7 on NAAEC and environmental assessment. This iterative and interactive process took place during the whole year of 2008.

Between July and October 2008, the author participated in a training course on “Evaluation of Sustainability” by the Research Institute for Managing Sustainability in order to deepen understanding of evaluation in general and of impact assessment as an instrument closely related to environmental assessment.

Between October 2008 and July 2009, the concept of NAFTA’S GREEN IMPACT was developed based on the definition of the theory of multi-level governance and the key suggestions for the greening of NAFTA, as well as on the analysis of Chapters 6 and 7.

The dissertation was finalized parallel to the work of the author as a researcher between August 2009 and January 2010, whereas the well developed drafts of the chapters were linked in a concluding context. During that time, selected results of the dissertation were presented at two conferences. At the conference in October on Stakeholder Perspectives in Evaluating Sustainable Development, a presentation on stakeholder participation in trade assessments, using NAFTA EA and the European Trade Sustainability Impact Assessment as examples, discussed the influence of civil society on trade assessments and specifically NAFTA EA (Podhora 2009b). In November, a final presentation, including a panel discussion focusing on the CEC and its influence on Canadian environmental policy, discussed in detail the interaction of the CEC with the nation states while using Canada as an example (Podhora 2009a).

### **Research stays**

The topic of this dissertation has a regional focus in the North American hemisphere. It analyzes an international environmental approach initiated by Canada, the US and Mexico. The author completed two three-month research stays in the NAFTA countries. Between October and December 2006, the author mainly resided in Mexico City, where almost all governmental institutions and many NGOs, foundations and associations are located. Furthermore, three journeys to a conference in Cancún, to the US-Mexican border region (Ciudad Juárez, Chihuahua/ Mexico, El Paso, Texas/ US) and to Michoacán, specifically to the national reserves of the monarch butterfly as a species of trinational concern, were realized.

Between March and May 2007, the author continued her research in Montréal, Canada, chiefly in the headquarters of the Commission for Environmental Cooperation. The journey was completed by two trips to the Canadian capital city of Ottawa.

Literature and information was especially lacking on the subject of Mexico, the CEC, the NAAEC and the Security and Prosperity Partnership, and more generally on the types of environmental assessment found in the NAAEC. The two research stays in Mexico and Canada therefore covered a wide scope of the missing information and closed central gaps in background knowledge. The research stays pursued three main objectives and completed the following tasks.

First, personal interviews explored the motivations, positions, opportunities, challenges, and needs of the respective countries and their institutions concerning NAAEC and environmental assessment.

Second, searches for topic-related literature were conducted, in the expectation that this information would be available in the NAFTA signatory countries due to the North American focus of the research. In Mexico, the Universidad Nacional Autónoma de México (UNAM) with its Biblioteca Nacional de México in Mexico and its Centro de Investigaciones sobre América del Norte (CISAN) were relevant libraries, as well as the library of the Border Environment Cooperation Commission. In Canada, the libraries of McGill University, Concordia University, Université du Québec à Montréal (all in Montréal), the University of Ottawa (in Ottawa), the library of the CEC were consulted. Also, the WTO library in Geneva could be briefly searched.

Third, participation in special meetings and visits to pertinent institutions took place during these research stays. During a journey to Cancún, Mexico, it was possible to participate in the public meeting of the CEC's Joint Public Advisory Committee (Regular Session 06-04 "Roundtable on Conservation and Trade", CEC JPAC 2006) (see Chapter 6.2.1.3). The trip enhanced understanding of the work of the Commission and the role and the influence of the Joint Public Advisory Committee as a relevant organ of the CEC, created additional contacts with the CEC staff and external experts, and enabled participatory observation on the work of the Advisory Committee as a CEC organ.

The one-week journey to the US-Mexican border cities of Ciudad Juárez, Mexico, and El Paso, US, was realized in order to learn about the special situation of the border region in terms of environmental pollution, NAFTA-related institutions and governmental binational transboundary cooperation. Mexican as well as American experts were contacted. Additionally, the Border Environment Cooperation Commission facilitated a field trip for the author to the Mexican colonia Anapra to learn about the special characteristics and environmental and spatial challenges of the border area and the work of the binational Border Commission.

It was also possible to visit two reserve areas of the monarch butterfly (Sierra Chincua, El Rosario) in Michoacán, Mexico to learn about an example of a species of trinational North American concern<sup>9</sup>.

Finally, participation in the regional Central American expert meeting of the EcoFair Trade Dialogue (Heinrich Böll Foundation, Misereor, Wuppertal Institute for Climate, Environment and Energy) increased understanding of the impact of trade liberalization on Mexico and other Central American countries, using the agricultural sector as an example.

The stay in Canada was geared toward learning about the special characteristics of the

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<sup>9</sup> During the interviews, several experts (for example Expert I, Expert A) pointed at the relevance of the monarch butterfly for common trinational environmental protection.



CEC and the NAAEC. The author was granted an extensive research stay at the CEC, where the staff members of the Commission, as representatives of the nation states, provided information on national positions and experiences. This exchange took place in formal interviews as well as in informal meetings, and in discussions in which the staff supported the understanding of NAAEC and the work of the Commission by explaining their work to the author. During two additional journeys to Ottawa, the Canadian capital, meetings with experts further clarified the Canadian perspective on the research topic.

## **Discussion**

Selected aspects of the dissertation were presented at conferences and published in papers and proceedings partly written with co-authors. These forms of scientific integration were the catalyzer for extensive discussions on the research topic and valuable insights during the research process.

## **Scientific integration**

Under the auspices of both supervisors from the Technische Universität Berlin and the Freie Universität Berlin, different aspects of dissertation were discussed in methodology- and topic-related colloquia. Specific elements of the dissertation could be discussed with colleagues at the institutes, e.g. the governmental concepts and the role of environmental assessment both in an international context.

The Ph.D. collegium “Ecology and Fairness in the World Trade Regime” at the Wuppertal Institute for Climate, Environment and Energy entailed monthly meetings with discussions on topic-related literature (for example, selected chapters of Hines 2000, Rawls 1979, Sachs, Santarius 2005), methodology trainings, and excursions to Geneva and the Public Forum of the World Trade Organisation WTO 2006 (“What WTO for the XXI Century?,” including a session and panel on trade environmental and sustainability assessment), the International Institute for Sustainable Development IISD, the South Center, and the United Nations Conference on Trade and Development (UNCTAD).

The dissertation originated in the initial extensive research for the author’s diploma thesis on “Environmental Impact Assessment in Mexico – Legislation and Case Studies,” written in 2003. The diploma thesis was based on an internship in the Municipality of Veracruz (Regiduría Ecología y Limpia Pública), Veracruz (Mexico), a first literature review, and a variety of personal expert interviews.

## **Central challenges during the research**

In comparison to NAFTA itself, the NAAEC and the CEC receive little attention in the literature. Most books about the CEC and the NAAEC cover the different aspects of the NAAEC in general, making only passing allusion to environmental assessment. Extensive expert interviews were thus central to the cogency and actuality of the research.

A further obstacle was that the Agreement on Transboundary Environmental Impact

Assessment in North America was still being negotiated among the three parties at the time of research (see Chapters 5, 7.2.2.1). The shift from the CEC to the Security and Prosperity Partnership and the ongoing negotiations of the agreement impeded the research due to the confidentiality of this political topic. Current information on the domestic positions and the steps and challenges of the negotiations was limited, as it was not available to the author.

The shift from a single focus on transboundary EIA to a wider context of environmental assessment thus occurred during the first year of research, in the context of a research stay in Mexico. Information on the US-Mexican border was still a key focus of the research stay, and in comparison to interviews concentrating on the US-Canadian border, these interviews provided a high quantity of information on this area of interest. This area thus serves as a key illustration of border issues in the dissertation.

A third research stay in the US, mainly in the capital city of Washington, D.C., was planned in order to ensure an equal and comparatively fair understanding and analysis of the topic for all three NAFTA nations. The stay had to be cancelled and could not be re-scheduled at a later date; however, American experts consulted in El Paso, Texas, as well as the US staff at the CEC and experts met at conferences provided extensive and valuable information on the US. Considering the extensive research already completed in Mexico and Canada, and the fact that the trilateral concept – rather than a trilateral comparison of the three domestic positions – is the main focus of the dissertation, a research stay in the US was deemed superfluous.

### 1.3.2 Methodology

The methodology consists of three parts: an extensive literature and Internet analysis, expert interviews and an illustration of the research results using the examples of case studies.

#### **Search for and analysis of literature and Internet information**

The extensive literature analysis tracked five key words/ topic groups:

- North American Agreement on Environmental Cooperation/ NAAEC,
- Commission for Environmental Cooperation/ CEC,
- transboundary environmental impact assessment/ transboundary EIA/ TEIA/ transboundary impact assessment,
- NAFTA environmental assessment/ trade environmental assessment/ trade sustainability assessment, and
- Security and Prosperity Partnership/ SPP.

During the literature review, primary as well as secondary literature was analyzed. This dissertation uses selected elements of primary literature, which is illustrated and analyzed by the information provided in the secondary literature and the expert interviews. The primary literature mainly consisted of the NAAEC itself as the central agreement, and

the CEC documents and publications that represent the results of the CEC's work. In addition, the primary literature included information that was available on the homepages of key governmental institutions such as the CEC, the domestic environmental ministries and agencies (mainly the Canadian Environmental Assessment Agency, the US Environmental Protection Agency, the Secretariat of the Environment and Natural Resources, and the Border Environment Cooperation Commission).

The secondary literature comprises mostly analyses and comments on the key topics of the dissertation from the authors presented in Chapter 1.2. Secondary literature partly included a bilateral and trilateral environmental and institutional comparison of the NAFTA countries and thus facilitated a trinationally equal examination of specific topics. Thus this literature is primarily used to provide general information for the basic background of the dissertation, providing the backbone of the discussions in Chapter 3 on basic facts about Canada, the US and Mexico, Chapter 4 on the types of environmental assessment in North America and Chapter 5 on NAFTA. The few articles that specifically related to the NAAEC or to the CEC and its work also provided valuable and up-to-date information on the current scientific debate, and served as the basis for augmenting the data provided by experts in the interviews.

The author searched for literature with a focus on each of the three NAFTA countries individually, binationally and trinationally. German, Mexican and Canadian public and governmental libraries as well as international journals were consulted during the research. Due to the innovative focus of the dissertation, the Internet provided extensive information via the homepages of topic-related institutions, such the CEC, the domestic environmental and trade ministries and agencies as well as NGOs and research centers, associations and research institutes, which supplied documentation of conference proceedings, working papers, and general information on their regular homepages (for examples see paragraph "Research approach: Scientific integration").

The CEC was one of the main institutional sources of vital information for the dissertation. The Commission maintains a trinational database of the domestic environmental regulations as part of its Publications and Information Resources (CEC, no date: Publications and Information Resource, id. 2003 with specifications for Canada, the US and Mexico). This database includes the domestic legal framework and trinational as well as binational approaches to environmental cooperation among the signatory countries. Any kind of information related to the work of the CEC is also published on its homepage, including its activities, the requests and decisions of the CEC organs as well as the working and final documents created under the working program of the CEC ([www.cec.org](http://www.cec.org) + links). This background information provided a valuable support for equitable background research and is integrated into the respective chapters.

### **Specific review: Case studies**

During the ongoing NAFTA EA, 49 studies were presented on the CEC homepage (see Chapter 7.3.2.1.2, Annex III), covering relevant aspects of the liberalization process

under NAFTA. Two of these studies were chosen to illustrate the interaction among the various types of environmental assessment and NAFTA (for a detailed description see Chapter 8):

- (1) The Forestry Industry in the State of Chihuahua: Economic, Ecological and Social Impacts post-NAFTA (Guerrero et al. 2000) and
- (2) NAFTA Transportation Corridors: Approaches to Assessing Environmental Impacts and Alternatives (Sierra Club et al. 2000).

Furthermore, additional selected studies illustrate particular aspects of NAFTA's environmental impacts within the general scope of the dissertation.

The two main case studies were selected after an analysis of the abstracts and selective readings of all studies from the CEC Symposia on Trade and the Environment in 2000, 2003 and 2005 that were available on the Internet.<sup>10</sup> These studies were chosen in order to present the diverse scopes of the NAFTA EA studies, and because they lie at opposite ends of the wide range of possible content of these studies. Five criteria determined the selection of the cases:

- a direct NAFTA context (a sector liberalized under NAFTA) and an indirect NAFTA context, respectively (a sector influenced by but not liberalized under NAFTA), each with a sectoral focus, illustrating the distinct relationships between specific sectors and NAFTA:
  - Forestry Industry: forestry as a specific sector liberalized under NAFTA (direct relation to NAFTA),
  - NAFTA Transportation Corridors: transportation as a sector that has not been liberalized under NAFTA and thus has been influenced by but is not directly related to NAFTA,
- coverage of all three NAFTA countries to provide insight into the variety of impacts across the hemisphere, as well as an example with a domestic focus to illustrate the breadth of this range:
  - Forestry Industry: mainly Mexico, with a few transboundary impacts on the US,
  - NAFTA Transportation Corridors: Canada, the US and Mexico,
- coverage of specific regional characteristics within the countries:
  - Forestry Industry: Sierra Madre Occidental as a special region in the Mexican state of Chihuahua (including culturally and ecologically unique characteristics),
  - NAFTA Transportation Corridors: selected cities/ border crossings in the

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<sup>10</sup> The papers from the Symposium 2008 were marked as draft versions and were not allowed to be quoted or cited (CEC, no date: Trade and Environment in North America 08 – Papers + links to the paper). The papers were therefore excluded from the selection process for the case studies of the NAFTA EA. However, information could be partly inferred from their titles and a first analysis of their abstracts (id.; id.: Related Documents); thus the dissertation refers to them briefly.

border areas of all three countries,

- coverage of different environmental aspects:
  - Forestry Industry: mainly forest with a very high level of biodiversity,
  - NAFTA Transportation Corridors: mainly desert characteristics along the southern border, and issues around the sensitivity of water bodies along the northern border
- negative NAFTA impacts present to various degrees and related to NAFTA to different extents:
  - Forestry Industry: negative environmental impacts not completely related to NAFTA,
  - NAFTA Transportation Corridors: explicitly negative impacts related to NAFTA.

It needs to be pointed out that all the studies referred to in this dissertation – including the two case studies – only supply a preliminary insight into NAFTA's environmental impacts and the interaction with different forms of environmental assessment within the context of this dissertation. The content of the selected studies and their results can be regarded neither as representative of the environmental impact of NAFTA as a whole nor of a regional or sectoral overview of all studies elaborated under the auspices of NAFTA EA.

### **Expert interviews**

Expert interviews were chiefly conducted during two research stays, in autumn 2006 in Mexico and in spring 2007 in Canada. Spring 2006 was spent in Germany preparing for the research stays. The experts were interviewed in German, English or Spanish, as the author speaks all three languages and could thus feed the information generated back into the dissertation.

The NAAEC and the CEC are fairly new institutions. Information on the implementation of the agreement and the work of the Commission is scarce, especially when compared to NAFTA, which came into force at the same time. When research for this dissertation was started, science had barely begun to conduct extensive scientific and interdisciplinarily profound analyses of the work, the challenges and the potential of the CEC. During the research stays, only a few publications on the topic could be identified. The expert interviews were thus vitally important to learning about these institutions and their practical work.

The experts were found through extensive Internet research on governmental homepages, research institutes with a North American focus, NGOs with a focus on environment and trade, international expert lists and through the recommendations of experts who were contacted during the research. The bibliography contains a list of the experts who kindly contributed their time and effort to the research. The table indicates the name, institution and position of the expert at the time of the interview (or the

relevant institution and position with which the expert was formerly associated) and the date and place where the interview took place.

The experts were contacted mainly on the basis of their positions as present or former staff members of universities and research institutes, governmental institutions on the international, federal and state level, NGOs, foundations or associations, and were very experienced with the key topics of the dissertation. Choosing interview partners based on these criteria assured that research gaps were addressed from the purely political side (government), the research side (research institutes, universities) and the environmental and political public side (NGOs, associations), in order to that the most extensive information possible was gathered. In sum, the information provided a deep and extensive knowledge base on the topic of the dissertation. It was not an objective of the interviews to gather different viewpoints from the various experts.

The expert interviews were primarily intended to provide background information and uncover interactions that were not covered by the existing literature (for example, the history of the approaches to environmental assessment within the context of the NAAEC and current implementation challenges). The interviews mainly referred to three central topics:

- CEC and NAAEC:
  - institutional background (mandate, structure and working program) and governance levels,
  - interactions with further national and international institutions and governmental levels,
  - interactions with the Security and Prosperity Partnership,
- environmental assessment:
  - approaches, implementation and challenges on the domestic, binational and trilateral level,
  - challenges to and potential of environmental assessment in the work of the CEC,
- special country characteristics:
  - governmental structure,
  - border areas.

To prepare the research stays in North America, the author arranged several meetings with German experts who work on international aspects of environmental assessment in Germany. Meetings were conducted with representatives of the German Environmental Protection Agency and the Federal Ministry for the Environment, as well as the Ministry for Nature Conservation and Nuclear Safety.

During the research stay in Mexico, meetings were conducted with representatives of

- the Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT),

- 
- the Instituto Nacional de Ecología (INE),
  - the Universidad Nacional Autónoma de México (UNAM),
  - the Universidad Autónoma Metropolitana (UAM),
  - the CEC (Mexican liaison office),
  - the Centro Mexicano de Derecho Ambiental (CEMDA),
  - the Comisión Económica para América Latina y el Caribe (CEPAL),
  - the United States Agency of International Development (USAID),
  - the Secretaría de Relaciones Exteriores,
  - the Secretaría de Economía, and
  - the Heinrich Böll Foundation (Mexican Office).

During the research stay in the US-Mexican border area, the author interviewed representatives of

- Mexico:
  - o the Comisión Internacional de Límites y Aguas (CILA),
  - o the Secretaría de Desarrollo Urbano y Ecología, Dirección Ecología of the Mexican State of Chihuahua,
  - o the environmental representative of a Maquiladora company.
- the US:
  - o the US International Boundary and Water Commission (IBWC),
  - o the Regional Office of the US Environmental Protection Agency (EPA),
  - o the Texas Commission for Environmental Quality (TCEQ).
- Mexico and the US:
  - o the Border Environment Cooperation Commission (BECC) including a project visit in the Colonia Anapra.

During the research stay in Canada, interviews were conducted with representatives of

- the CEC (present and former staff members),
- Foreign Affairs and International Trade Canada (DFAIT),
- Environment Canada,
- McGill University,
- Concordia University,
- Unisfera,
- International Institute for Sustainable Development (IISD), and
- Center for International Sustainable Development Law (CISDL).

The meetings with the experts were divided into two types: (a) meetings that provided information explicitly intended for the research and (b) supplementary meetings that either served as an essential platform for increasing understanding of the broader context of the research or establishing valuable contacts with other experts, as well as receiving literature recommendations and insights for further research possibilities.

During the interviews, comprehensive and investigative aspects were analyzed with respect to the analytical questions of the Ph.D. thesis. The interviews usually adhered to three guiding questions that were usually individually adapted in accordance with the key research questions of the Ph.D. and the professional background of the respective experts. Some guiding questions, however, were posed to several aspects as the different professional background of the experts was expected to reveal different elements of the research topic (e.g. a governmental and thus official view and a view of an NGO and thus of civil society). In the process of expert interviews, the questions could be continually be more specified to cover explicit gaps, that were still existent in the research. Additionally, several experts could be met twice for interviews or an update of the supportative meeting in order to go into details on the research topic and to improve the understanding of and to discuss newly gained information.

The selection of the experts, the development of the questionnaires, the structuring of the interviews and the analysis were supported mainly by Froschauer, Lueger (2003) as well as methodological trainings by supervisors and the Heinrich Böll Foundation.

The interviews usually lasted approximately one hour. They were partly concluded by asking for a vision of the future with respect to the central topic of the interview in order to learn about future outlooks in the interview field. In sum, the interviews provided valuable information and inspiration for the understanding of the broader context of the topic of the dissertation, thus establishing a solid basis for the dissertation.

Most interviews were recorded. In some cases recording was not possible (for example, due to excessive noise on the interview site) so the author took notes. Selected interviews and selected parts of the interviews were summarized on the basis of thematic paragraphs. The interviews were not transcribed and encoded in a computer program. The summaries and paragraphs were sent to the experts for scientific proof of the interviews. The experts were asked to comment the summary, if they so desired, and to authorize it. The information provided through the interviews was then used and treated as regular literature. The interviews that were explicitly used in the dissertation were adapted according to the comments of the experts, if requested, and are sent directly to the two supervisors and the chair of the disputation committee in the way they were presented to the experts in their final version with the individual guiding questions added for the supervisors.

During the research, a total of 72 meetings and interviews took place. Thirty-five interviews were analyzed in greater detail, which facilitated the understanding of the key issues of the dissertation. Information from 25 of these interviews were authorized and



23 then were encoded and included in the dissertation (encoded with Expert A to Expert W), whereas the other interviews – though also partly summarized and authorized – provided additional working summaries. These interviews were largely selected to cover extensive information on the central topics of the dissertation and to fill specific topic-related gaps, including the following: \*CEC, \*NAAEC, \*transboundary EIA, \*NAFTA EA, \*domestic environmental assessment, \*environmental multi-level governance, \*Security and Prosperity Partnership, \*US-Mexican border area and \*country characteristics in general and specifically concerning environmental assessment. The general summaries of the analyses of the other interviews are also included in the confidential part of the dissertation, in order that the flow of information provided through the interviews may be traced.

During the interviews, the author gathered new data, as the interviews were mainly intended to provide information not yet available in the literature, to link the information in order to attain an overview of the content of the dissertation, and to uncover opportunities for finding this information on homepages and further literature. Thus not all interviews were summarized, particularly if they confirmed information already provided by experts interviewed prior to the meeting in question or through additional research. However, the large number of interviews conducted helped to focus the research goals of the dissertation, gain deeper knowledge of domestic issues, and understand the special characteristics of the multi-level governance system, even though this information was not always summarized and included in the dissertation.

The author will keep the identity of the experts confidential. The decision was taken in agreement with the two supervisors, Prof. Dr. Johann Köppel and Prof. Dr. Miranda A. Schreurs. The dissertation and further publications thus include expert information whose bibliographical reference is encoded. In order to guarantee the scientific standards of the research, the code is available to the two supervisors, who will also keep it confidential. Furthermore, the two supervisors and the chair of the disputation committee have received the summaries of the interviews, in which the guiding questions for the respective interviews are included. Any questions the reader may have should be directed to the author (aranka\_podhora@web.de), who will forward the request to the respective expert.

## 1.4 Structure of the Dissertation

The dissertation is divided into three parts, which are illustrated in their relation to the innovative research elements of the dissertation in Figure 1. The present chapter, Chapter 1, introduces the frame of the dissertation and the scientific background for the research.

**Part A** includes Chapters 2 to 4, which provide background information for the rest of the dissertation. In order to outline the theoretical basis for this dissertation, Chapter 2 probes the idea of governance, focusing thereby on the approach to multi-level governance established by Marks and Hooghe. Their approach is then analyzed within

the parameters of the dissertation. In a second step, the chapter defines the key criteria for greening trade, thereby building on the scope of environmental assessment and comments of experts.

Chapter 3 considers basic data and national background information on Canada, the US and Mexico as NAFTA signatory countries. The focus relates to the central topics of the dissertation on the domestic level: governmental levels, economy including trade and environment. Inquiry into these differences in the domestic approaches is essential to understanding of the challenges of trilateral environmental cooperation.

Chapter 4 then investigates the four forms of environmental assessment as they are integrated into the NAAEC and the domestic level and thus form part of the dissertation: the project environmental impact assessment (project EIA), the transboundary environmental impact assessment (transboundary EIA), and the strategic environmental assessment for policies, plans and programs (SEA), which also includes the environmental assessment of trade agreements as part of the policy SEA on the domestic level. Besides a general description of these types of environmental assessment, this chapter also dissects the domestic approaches to various forms of the instrument. Again, understanding the differences in domestic approaches facilitates the subsequent analysis of trilateral cooperation regarding environmental assessment and the concept of NAFTA'S GREEN IMPACT developed in this dissertation. As environmental assessment within the NAAEC is the central element of the dissertation, it is therefore extensively and separately analyzed in Chapter 7.

Chapter 5 then introduces NAFTA and its two side agreements on environmental and labor issues, the North American Agreement on Environmental Cooperation and the North American Agreement on Labor Cooperation, respectively. Besides these two trilateral agreements, this chapter also refers to the bi-national border agreement between the US and Mexico. A main concern of this chapter is the innovative structure of NAFTA with its two parallel agreements and the bilateral border cooperation. Information is also provided on the general economic and environmental content of NAFTA and on the economic relevance of the trade agreement. The chapter also relates NAFTA to the Security and Prosperity Partnership (SPP) as a relevant recent step towards trilateral integration. The Partnership also partly interacts with environmental assessment and therefore forms a current, though less important, component of the dissertation.

**Part B**, consisting of Chapters 6 and 7, forms the central scientific analysis of the Ph.D. thesis. Chapter 6 analyzes the NAAEC's different governmental levels as they are determined in the agreement itself and as they act in practical application of the accord. Special attention is given to the CEC, as it plays a prominent role in the NAAEC. Furthermore, the chapter focuses on the interaction between NAFTA and the environment in order to identify linkages with, and contributions to, the greening of NAFTA.

Chapter 7 addresses the three forms of environmental assessment as they are integrated

into the NAAEC: the domestic environmental assessment, the transboundary EIA and the NAFTA EA. These three approaches are compared according to the content of the NAAEC articles and to their practical implementation. Besides the comparisons, the chapter remarks upon the individual development of each type, with regard to their practical implementation and the specific challenges facing their development. This detailed analysis of historical development introduces the challenges to the concept of NAFTA'S GREEN IMPACT that are further expounded upon in Chapter 8.

**Part C** presents the scientific results of the dissertation, beginning with Chapter 8, in which the idea of environmental assessment is linked to the greening of NAFTA. The research results discussed in Chapters 6 and 7 and evaluated through the lens of multi-level governance and influences on greening trade form the basis for this chapter.

The scientific results are divided into three parts. First, the chapter explicates the rationale for greening NAFTA. Second, the chapter identifies the relevant interrelationships between NAFTA and the different types of environmental assessment based on the two case studies. Third, the concept of NAFTA'S GREEN IMPACT elaborates how the instrument of environmental assessment can be extended in order to contribute to the greening of the NAFTA. The concept includes five tasks that refer to the different types of the instrument of environmental assessment and the influence and tasks of the different levels of governance. The chapter thereby identifies pertinent challenges to the concept of NAFTA'S GREEN IMPACT and pinpoints the opportunities that the CEC in particular, as the relevant trilateral institution, could provide in order to meet these challenges. In closing, this chapter discusses the possibilities for transferring results to other free trade agreements.

Chapter 9 supplies a final conclusion and points to the need for further topic-related research.

A final summary of the dissertation is provided in Chapter 10.

The dissertation concludes with a bibliography in Chapter 10. In addition to the literature, legal agreements and internet pages referred to in the dissertation, this chapter also names the experts who kindly contributed their time for the interviews.

The annexes then provide additional information on selected aspects of the dissertation. They include selected maps of the CEC Atlas in Annex I, a general index of NAFTA and the NAAEC (Annex II), a list of the studies on environmental assessment in NAFTA presented at public symposia (Annex III) and a list of the Secretariat Reports in Annex IV. Annex V presents the regional dispersion of the NAFTA EA case studies.

Figure 3: Overview of the dissertation “Environmental Assessment and the Greening of NAFTA”

The innovative elements of the research are marked in bold and underlined.

Multi-level governance, greening NAFTA (Chapter 2)	}	<b>Scientific reference and criteria</b> on multi-level governance and greening trade
Canada, the US, Mexico (Chapter 3)		<b>Part A</b>  Background information the NAFTA signatory countries, environmental assessment and NAFTA
Environmental assessment (Chapter 4)		
NAFTA (Chapter 5)		
CEC and nation states in the NAAEC (chapter 6)	}	<b>Part B</b>  <u>Analysis of central research topics multi-level approaches in the NAAEC and environmental assessment in the NAAEC</u>  <u>Application of multi-level governance to the NAAEC and its governmental levels</u>  <u>Comparison of NAAEC’s approaches to environmental assessment and its practical implementation</u>  <u>Application of multi-level governance to NAAEC’s approaches to environmental assessment</u>
Environmental assessment as part of the NAAEC (chapter 7)		
Concept of NAFTA’S GREEN IMPACT: Greening NAFTA through environmental assessment and multi-level governance (Chapter 8)	}	<b>Part C</b>  <u>Establishment of rationale for the need to green NAFTA</u>  <u>Derivation of linkages between NAFTA and NAAEC’s approaches to environmental assessment</u>  <u>Proof of derivation through case studies</u>  <u>Establishment of the concept of multi-level governance and its relevance</u>  <u>Discussion of challenges to the concept</u>  <u>Transfer of the concept to further free trade agreements</u>
<b>Abbreviations</b> CEC: Commission for Environmental Cooperation NAAEC: North American Agreement on Environmental Cooperation NAFTA: North American Free Trade Agreement		



## **2 Theoretical Framework: Multi-level Governance and Criteria for Greening NAFTA**

This chapter presents the theoretical background and reference framework for multi-level governance and the relevant central criteria for greening NAFTA. First, the chapter describes multi-level governance, as Marks' and Hooghe's concept of type I and II multi-level governance to provide a theoretical assessment framework for the analysis of this research. This dissertation expounds upon this concept by extending and adapting it to specific settings in the North American environmental governance system provided through the NAAEC. Furthermore, the key statement for "greening NAFTA" based on criteria developed from expert interviews and the central idea of environmental impact assessment is developed within this research.

Both the theory of multi-level governance and the proposal for greening NAFTA are applied in the discussions of governance and greening elements in Chapters 6 and 7, on the NAAEC and environmental assessment in the NAAEC, respectively. The results of the analysis, as well as the general setting of multi-level governance and the proposal on greening NAFTA, form the reference framework for the concept of NAFTA'S GREEN IMPACT in Chapter 8.

### **2.1 Multi-level Governance**

The term governance basically describes the different forms of regulation on the governmental and non-governmental level. Governance "refers to any collectivity, private or public, that employs informal as well as formal steering mechanisms to make demands, frame goals, issue directives, pursue policies and generate compliance" (Rosenau 2004: 31). When commonly used measures derived from politics, administration or business have failed to produce a solution to a problem, governance is applied. Governance connects the different actors involved in a situation. The approaches of the actors who participate in problem-solving are usually dissimilar, resulting in a wide range of possible interactions, connections and contradictions (Benz et al. 2007: 10 f).

Governance can be found in and is applied to a wide variety of disciplines; for example, political science, economy and social science. It may be limited to a certain topic or sector, but can also cover several topics at the same time. The dissertation draws upon the idea that "governance" is the antipode to the concept of "government" as a static type of institutional influence (id.). The governance approach can mainly be found in political science and in the international relations between countries. These relations usually do not adhere to hierarchical structures, but exist in a figurative sense as "Governance without Government" (Rosenau/ Czempiel 1992 quoted in Benz et al. 2007: 12). Benz et al. (2007: 9 ff, esp. 12) thereby conclude that hierarchy is not needed to establish a permanent structure of action.

The idea of multi-level governance mainly originated in the analysis of European

integration (Flitner, Görg 2008: 164). Mark, Hooghe (2004), Hooghe, Marks (2003), Rosenau (1992), Benz, Dose (2004), Benz et al./ Benz (2007), Brunnengräber/, Walk (2007), Brunnengräber, and Burchardt, Görg (2008), among other authors, have provided vital research into the concept of multi-level governance in the European Union as well as in international relations. The European Union and the present system in North America differ in their state of political integration as well as in their cooperation on various economic, social or environmental issues. Whereas the European Union is founded upon a European government that dominates decision-making for the member countries, topic-related interaction within the North American hemisphere requires voluntary cooperation, as the present dissertation makes clear. The North American nation states still have complete domestic sovereignty and even provide – to a certain extent and depending on the country – a high level of sovereignty on the subnational level. Supra-national institutions<sup>11</sup> or regulations comparable to European institutions such as the Council and Parliament (see mainly Chapters 3, 5 and 6) do not exist.

Despite these differences, the concept of multi-level governance will be applied as a theoretical concept in this Ph.D. thesis, as approximations of this governance type are apparent in North American environmental cooperation. In comparison to the scientific weight it has been given in discussions of the European Union, multi-level governance has been rarely discussed in the context of North America and its extensive environmental focus. In order to ameliorate this research gap, the analysis of Marks and Hooghe concerning multi-level governance type I and II will be transferred to North America and applied to the environmental arena. The discussion is tailored to the North American circumstances in order to improve the analysis and channel the research effort. Employing Marks' and Hooghe's theory enables the dissertation to concentrate on initiatives encompassing several levels of international governmental and non-governmental cooperation and on the instrument of environmental assessment in particular.

Multi-level governance in itself usually includes five levels: international, meso, national, regional and local (Hooghe, Marks 2003: 234). The concept as a whole examines the interaction of the different levels and the process of finding solutions to existing and possible interdependencies (Benz 2007: 298). In recent years, “[f]ormal authority has been dispersed from central states both up to supra-national institutions and down to regional and local governments” (Marks, Hooghe 2004: 15). Multi-level governance distributes competences and tasks among the different levels and includes characteristics of the structure, political processes and mechanisms of coordination (Benz 2007: 298). Operation on various levels is necessary in order “to capture variations in the territorial reach of policy externalities” (Marks, Hooghe 2004: 16). The level and scope of governance may correspond to the scope of the problem. Lower levels of the hierarchy

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<sup>11</sup> In this dissertation, the term “institution” may comprise the NAAEC as agreement as well as the CEC as Commission.

address tasks of greater detail or smaller regional scope (Benz 2007: 297 f, id.: 2004: 111). On a related note, multi-level governance also means that a certain political general structure may create a mode of interaction specific to a particular topic/ decision (Benz 2007: 298), for example environment.

The power and influence of the nation state can thus be seen as diminishing (Benz 2004). Within multi-level governance, the power of collective decision-making is dispersed among the different levels.

Making their argument for applying their concept to international debates, Marks and Hooghe assert that (Marks, Hooghe 2004: 16 f):

- multi-level governance establishes a dispersion that on the one side can be regarded as more effective and on the other side superior when compared to state monopoly,
- “governance must operate at multiple scales in order to capture variations in the territorial reach of policy externalities”,
- multi-level governance is necessary to “internalize externalities” (as a core argument in the discussion), each of which covers a wide scope of levels,
- multi-level governance better reflects a wide range of public goods,
- it “facilitate[s] credible policy commitments,” and
- it “facilitate[s] innovation and experimentation”.

The structures of cooperation pose challenges for multi-level governance. This governance form, since it creates complex political processes and has a high quantity of stakeholders with possibly contradicting opinions, aims and activities, is inflexible and barely amenable to reform. Multi-level governance does not reform existing institutional structures; rather, the structures are marked by constant changes in the system of interaction created through strategies and without planned influences. These changes often only affect single or selected elements of the cooperation (Benz 2007: 308). Despite these challenges, the strengths of multi-level governance are a valuable support in analyzing North American approaches to environmental assessment and in greening NAFTA.

Marks and Hooghe describe the economic development of Western Europe in the 1980s and early 1990s as fundamental to European integration, maintaining that the “internationalization of markets for goods and especially capital, decline of traditional industry and industrial employment, pressures toward flexible specialized production, decentralization of industrial relations, declining international competitiveness and high levels of long-term unemployment--have transformed authoritative decision making as well as economic policy and political-economic institutions” (Hooghe, Marks 1997: 1). Such activities, impacts and concerns resulting from international economic cooperation are also evident in the North American hemisphere under NAFTA (see Chapter 5). The multi-level governance approach usually cited in relation to the European Union will therefore be applied to North America, with particular focus on the environmental



sector.

### 2.1.1 Marks and Hooghe: Multi-level Governance Types I and II

The framework of multi-level governance provided by Marks and Hooghe forms the theoretical basis for the present work. The primary texts by these authors referred to in this dissertation include:

- “Contrasting Visions of Multi-level Governance” (Marks, Hooghe 2004) and
- “Unraveling the Central State, but How? Types of Multi-level Governance” (Hooghe, Marks 2003)<sup>12</sup>.

Further relevant publications of the two authors that supported the understanding of the concept and its possible role for North America are “Multi-level governance and European Integration” (Hooghe, Marks 2001) and “The Making of a Polity: the struggle over European integration” (id. 1997). To support the understanding as well as the scientific development and application of their respective work, further authors were related during the research, mainly Knill (2003) “Bestandsaufnahme: Die umweltpolitische Problemlösungsfähigkeit der EU”, Birkel/ Liefferink (2008) “Living Happily Ever After? How ‘Going International’ Changes the Relationship between EU Member States and EU Institutions in Environmental Policy” and Eckerberg/ Joas (2004) “Multi-level Environmental Governance: A concept under stress?” who gave a broad overview of existing approaches to the concept.

Hooghe and Marks (2003: 236 ff, Marks, Hooghe 2004: 16 ff) base their analysis on the extensive examination of several international approaches to multi-level governance (and not only the case of the European Union). They divide their inquiry into four central categories:

- (a) type of jurisdiction: scope/ objective of the institution,
- (b) membership: intersection among different institutions/ among the various organs of the institution,
- (c) level of jurisdiction: (non-) governmental level of action/ political influence, and
- (d) design: manner of application/ implementation of the institution.

They relate these four topics to two types of multi-level governance, type I and type II, and assign these types different characteristics with regard to the four topics. Type I is rather fixed, whereas type II is less formal and more flexible. Table 1 summarizes essential differences between these two types with respect to the four topics.

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<sup>12</sup> Supported by the previous version: Hooghe, L., Marks, G. (2001): Types of Multi-Level Governance.

Table 1: Types of multi-level governance

(Marks, Hooghe 2004: 16 ff, Hooghe, Marks 2003: 236 ff)

Topic	Type I	Type II
a) Type of jurisdiction	general purpose	task-specific purpose
b) Membership	non-intersecting	intersecting
c) Level of jurisdiction	limited number of levels	unlimited number of levels
d) Design	system-wide architecture	flexible design
Regional example	European Union (mainly)	selected US regions

Multi-level governance **type I** refers to the **(a) general purpose** of governance and does not provide any specifications. Within type I, the **(c) number of levels** is limited and **(b) non-intersecting**, in that they usually do not overlap (Hooghe, Marks 2003: 236 f). The jurisdiction can thereby be described as “mutually exclusive at each territorial level” (id.: 241). “[J]urisdictions [are] bundled in a small number of packages,” big enough to handle a wide variety of tasks within the responsibility of the respective authority. These jurisdictions are not necessarily limited in their influence to their territory (quote: Marks, Hooghe 2004: 18; content id.: 17 ff).

A last relevant aspect of type I is the strong structure of its design: it is a stable, **(d) “Systemwide, Durable Architecture”** (Hooghe, Marks 2003: 237). In sum, type I is usually found in a “conventional territorial government up to the national level,” including the European Union (quote: Marks, Hooghe 2004: 22, content: id. 16 ff).

In contrast to the quite fixed conditions of type I, multi-level governance **type II** can be characterized as rather “fluid” (Marks, Hooghe 2004: 24). Type II consists of an **(c) unlimited number of levels** that can create “multiple, functionally-specific, policy regimes with overlapping national memberships” (Hooghe, Marks 2003: 234), whereby each level can focus on the respective issue and a **(a) task-specific purpose** (Hooghe, Marks 2004: 20). The jurisdictions can thereby be applied individually according to the needs of and changes within the governance structure. The **(b) intersection** of the levels and the jurisdictions is central, as it may support problem-solving (id.: 14). As with type I, these intersections may extend beyond the boundaries of the domestic territory (Hooghe, Marks 2003: 236 f).

On one hand, the multiplicity of levels allows for a possibly different scope for each integrated level to address an issue. On the other hand, it provides the opportunity to strengthen the jurisdiction that focuses on a specific topic (Hooghe, Marks 2003: 237) and that “effectively internalizes its benefits and costs” (Marks, Hooghe. 2004: 21). Type II can thus be characterized as polycentered governance with a less hierarchical structure (Hooghe, Marks 2003: 238).

Marks and Hooghe identify a last special characteristic of type II multi-level governance, namely **(d) design**: Type II design, in contrast to the extensive but stable architecture of

type I, is flexible, which permits functional change to accommodate an issue or problem and facilitates focus on specific details.

It should be emphasized that the two types of governance “coexist” (id.: 240). Despite their different characteristics a link does exist between them: type II jurisdiction can be “embedded in legal frameworks determined by type I jurisdiction” (Marks, Hooghe 2004: 24). Based on type I legislation, a wide variety of type II approaches usually develops.

### 2.1.2 Extension of Marks and Hooghe to Environmental Multi-level Governance in North America

The concept of multi-level governance according to Marks and Hooghe is based on four elements – (a) type of jurisdiction, (b) membership, (c) level of jurisdiction and (d) design – whose different characteristics create multi-level governance types I and II. In this dissertation, the author has tailored these four elements, according to the scope and the research, to embody the characteristics of North American environmental multi-level governance. In addition to the specification of these elements, the author has also developed an analysis within the dissertation that creates of a mix of types I and II, here called a “semi-type.”<sup>13</sup> The semi-type is a combination of the two types: a comparatively fixed legal background is merged with a high level of flexibility in practical implementation. A topic is thus characterized as either only type I or type II with regard to legal background and practical application; or, alternatively, the topic can display a fixed legal background characteristic of type I, but also the flexible implementation of this legal background characteristic of type II, and would therefore be identified as semi-type. The advantage of this distinction for the purpose of this dissertation is the in-depth analysis it supports, which explicitly focuses on North American environmental multi-level governance and differentiates between the existing legal framework and the opportunities it provides in its practical implementation. Both facets of the analysis underpin the concept of NAFTA’S GREEN IMPACT in Chapter 8.

Table 2 summarizes the analytical frame for environmental multi-level governance in North America. The extensions specified in this dissertation are underlined, and each extension is divided into an institutional part (e.g. ministries) and a legal part (e.g. agreements).

Table 2: Types and levels of multi-level governance extended to environmental multi-level governance in North America

(according to Marks, Hooghe 2004: 16 ff, Hooghe, Marks 2003: 236 ff with author’s addition)

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<sup>13</sup> The reference literature mentioned does not explicitly refer to an opportunity to create a semi-type.

<b>Legend:</b> regular: Marks, Hooghe (2004), Hooghe, Marks (2003) <u>underlined (dashed): extrapolated from Marks, Hooghe for the purpose of the dissertation with view to the NAAEC</u> <u>underlined: (author's specification as theoretical development for the dissertation)</u>			
Topic	Type I	Type II	Semi-type <sup>14</sup>
<b>a) Type of jurisdiction</b>	general purpose	task-specific purpose	<u>specific tasks in the legal specification and practical implementation following from a general purpose</u>
<b>b) Membership</b> - horizontal level - vertical level - intermediary level	non-intersecting	intersecting	<u>semi-intersecting membership depending on the legal framework and the practical implementation</u>
<b>c) Level of jurisdiction</b> - intergovernmental level - national / subnational level - regional level - non-governmental level	limited number of levels	unlimited number of levels	<u>officially limited number of levels, integrating an unlimited number of levels in the practical implementation</u>
<b>d) Design</b> - legal - practical	system-wide architecture	flexible design	<u>fixed background allows for flexible application</u>

The **(a) type of jurisdiction** is mainly applied in agreement with Marks and Hooghe, divided into a **general purpose (type I)** and a **task-specific purpose (type II)**. The semi-type plays an inferior role here as a strong link between types I and II, since a high number of type II issues originate from a type I framework (as identified by Marks and Hooghe 2004: 24), whereas type II may be regarded as a specification of type I in either its legal extension and/ or practical implementation. However, a type I with a general purpose legal background may lead to a type II implementation, so that the semi-type again applies.

The **(b) membership element** needs to be expounded upon within the framework of the dissertation, as different types of **non-intersecting (type I)** and **intersecting (type II)** memberships exist in legal, institutional, and practical contexts. This structure, contingent on context is also partly reflected in the semi-type (see also the element of

<sup>14</sup> The suggestions for the semi-type that are presented here form the general scope of the semi-type. However, these suggestions may also function in reverse, for example, in the case of the type of jurisdiction, the demands of a specific setting or situation may prompt a more general application of this topic.

**(d) design).** The topic of membership must, therefore, be parsed into three different forms of intersection: the horizontal, the vertical and the intermediary.

Though Marks and Hooghe briefly refer to different levels that exist either independently or within a hierarchy of intersecting and non-intersecting memberships (Hooghe, Marks 2003, id. 2003: 239), this dissertation examines horizontal and vertical membership in particular. Introducing horizontal and vertical dimensions facilitates an easier relation of these two elements of membership to the intermediary level created here. All three levels comprise the following aspects:

- **horizontal**, including agreements and institutions on the same level
  - *supra-national*
    - NAAEC – NAFTA – partly Security and Prosperity Partnership
    - CEC – Free Trade Commission<sup>15</sup>
  - *national: federal*
    - legal references to environmental cooperation and to environmental assessment in Canada, the US and Mexico (for example: Canadian Environmental Assessment Act, US National Environmental Policy Act, Mexican General Law Law of Ecological Balance and Environmental Protection, additional domestic regulations, lists, guidelines), international agreement on transboundary EIA
    - lead ministries in Canada including the Environment Canada/ Canadian Environmental Assessment Agency, lead agencies in the US including the Environmental Protection Agency, the Mexican environmental ministry SEMARNAT addressing environmental protection and environmental assessment
  - *subnational: state level*<sup>16</sup>
    - legal references to environmental protection and environmental assessment on the state level, international agreements on transboundary EIA
    - lead ministries on the respective state level
- **vertical**, referring to agreements and institutional cooperation among the individual levels
  - NAAEC – legal domestic references (federal/ subnational level) mainly on environmental protection and environmental assessment (– if applicable environmental frameworks from the regional level)
  - CEC – environmental authorities from the federal level/ subnational level –

<sup>15</sup> No counterpart for the Security and Prosperity Partnership could be identified.

<sup>16</sup> Here the term “states” refers to the states/ provinces/ territories of all three countries despite their different governmental structures.

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environmental authorities from the regional level

- **intermediary**, offering additional support to each level individually
  - o public participation on one or more of the different levels.

These levels may vary in their application and implementation according to specific tasks and conditions. The influences of membership structures on the intermediary and non-governmental levels partly overlap with the influences of element **(c) level of jurisdiction** (see next topic).

Hooghe and Marks (2003: 234) refer to five main **(c) levels of jurisdiction** for multi-level governance: international, meso, national, regional and local. The dissertation research analyzes some similarities with and some deviations from this structure. Precisely, the analysis outlines four levels that are differentiated by the degree of formal and informal governmental reinforcement available. The **international level** – classified here as **intergovernmental level** – and **national levels** (federal/ subnational) are largely defined by governmental support; on the **regional level**, governmental support is available but is not reinforced by legal authority.<sup>17</sup> In this dissertation, the regional level is described as an informal amalgamation of governmental representatives without any formal, legally binding political influence.

Despite the fact that the **non-governmental level** is not an explicit jurisdictional level according to Marks and Hooghe, it will be integrated into this dissertation due to the informal influence it wields via, for instance, the impact of public demand. It can neither be regarded as an integral part of the vertical line from the international down to the local level nor as a linked vertical component of societal participation, but rather as an additional yet individual support to the various levels.

As noted above, the non-governmental level and the intermediary level of the topic **(b) membership** partially overlap in their spheres of influence. The topic **(c) levels of jurisdiction**, however, is the least formal dimension of multi-level governance, and its influences also have the least binding power. The levels are as follows:

- **intergovernmental level:**
  - o the NAAEC as trilateral agreement with the CEC as its respective Commission
- **national level:** the formal governmental and legal structures of the three nation states, divided into
  - o the authorities from the federal level with an environmental federal jurisdiction

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<sup>17</sup> This dimension is also known as “shared areas.” Bastmeijer, Koivurova (2008: 15) state in the context of transboundary EIA: “Shared areas are resources that are not (fully) subjected to the exclusive jurisdiction or control of a state but cannot be deemed to a common property of all states either. Usually, there is a certain measure of common interest in exercising shared rights over the resource in question, which is most often a geographically confined one. Well-known examples are [...] international rivers or migratory species.”

- the authorities from the subnational level each with an individual state environmental jurisdiction, possibly supplemented by input from the local level
- **regional level:**
  - informal aggregation of several states (possibly from different countries and states), possibly supplemented by input from the local level
  - possible voluntary cooperation agreement among the states as a substitute for more formal legal authority
- **non-governmental level:**
  - involvement of the public, NGOs, experts, and industrial/ business communities without formal legal powers via inclusion in the NAAEC, in domestic legislation and in practical implementation.

These levels are further divided into mandatory levels and voluntary levels. Mandatory levels require political legitimation by governmental institutions and are guided mainly by governmental and legal decisions. Their creation and their assignments are basically binding according to the NAAEC. In contrast, the NAAEC and its practical implementation only suggest the creation and integration of the voluntary levels, to be included in the work of the mandatory levels as opportunity affords.

To various extents and in various ways, the mandatory and institutionalized levels are assigned tasks involving environmental assessment. In contrast, the regional level neither influences the NAFTA EA nor the types of domestic environmental assessment. However, the regional dimension of environmental assessment may interact with regional governmental as well as economic cooperation strategies; hence, the regional level plays a vital role in this dissertation.

The local level has a rather minor influence on international and domestic environmental protection and trade liberalization in terms of participation in negotiations and decision making, as well as the execution of environmental assessments. Due to its limited institutional influence, the local level contributes to the work of the subnational and regional levels, rather than the work of the federal level. This dissertation, therefore, does not address this level separately.

Research suggested the need to divide the fourth topic of **(d) design** into two parts: an analysis of formal requirements and of practical implementation. This differentiation was developed due to the wide scope of practical implementation of the NAAEC through the CEC. Thus the general parameters of the design developed by Marks and Hooghe have been extended to:

- **legal framework/** authority, mainly via the NAAEC and
- **practical implementation**, mainly via the different levels of jurisdiction (topic (c)).

The design is closely connected to the semi-type, which also divides the four topics into legal and practical parts.

## Semi-type

The dissertation divides its analysis into the range of legal frameworks/ authority on the one side and practical implementation on the other. As a result of this separate analysis, the legal and practical parts may be allocated to different types of multi-level governance within the same topic. Therefore, the author has created the semi-type<sup>18</sup> as a specific analytical step, in order to mix the results of multi-level governance type I and type II (according to the analysis in the following chapters). The semi-type can be applied in all four topics suggested by Marks and Hooghe. This type is also related to and supported by the topic (d) design, which also differs in terms of the elements of legal framework and practical implementation.

It should be emphasized, however, that the semi-type as a mixture between type I and type II does not apply when the circumstances of legal and/or institutional support and/or the application of this authority cannot be clearly related to one of the types. This unclear instance will be defined simply as a “mixture between type I and type II” and will not further be discussed in this dissertation.

In the dissertation, multi-level governance type II, elaborated by the specifications mentioned above and the semi-type, will form the theoretical background of NAFTA’S GREEN IMPACT (see Chapter 8), which is based on international and domestic legal frameworks and agreements. The concept of NAFTA’S GREEN IMPACT employs the strengths of the four different topics and the three different types of multi-level governance to create a support net for greening NAFTA through environmental assessment.

Type II of multi-level governance can be applied to two aspects of international and transboundary cooperation. With respect to the national or international frontier, multi-level governance supports the effort “to internalize transnational spillovers in the absence of authoritative coordination” (Marks, Hooghe 2004: 24). This governance form is thereby applied to a wide range of environmental topics, as it allows for fluidity within the cooperation process. Concerning international cooperation, the focus of type II on specific topics is advantageous. It facilitates the integration of domestic legislation on the international level and focuses on specific issues rather than aiming at a general cooperation covering a wide range of topics (id.: 24 ff).

With respect to cross-border regions, type II multi-level governance facilitates a focus on specific regional and current problems (the so called “problem-driven jurisdiction” (Hooghe, Marks 2003: 231)). As a result, regional commissions can be created to address these problems, including, for example, governmental representatives and local authorities as well as non-governmental actors. International agreements based on type II governance are usually specific, focusing, for example, on climate change and

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<sup>18</sup> Search in Google Scholar (in addition to the journal review) for “Marks, Hooghe”/ “multi-level governance” and “semi-type”/ “type III”, whereas no similar approach to that of the author presented here could be identified (last search January 15, 2010).



shipment of hazardous waste. The type may also refer to the existence of topic-related border or international institutions and working groups in “densely populated frontier regions” (id.: 238). These international approaches may partly overlap with an existing domestic legal framework.

To conclude the line of argument for selecting type II, it should be pointed out that this type is less attached to the structure of the European Union, and that Marks and Hooghe refer to selected examples of type II within the North American region.

The extension of the four topics presented in Table 2 underpins the analysis of the North American system in this dissertation. It is necessary in the analysis as well as in the development of the concept of NAFTA’S GREEN IMPACT to pay special attention to the distinctive intersections of the membership, levels of jurisdiction and design of the dissertation topic. These extensions contribute information valuable to the development of the greening concept.

Applying the semi-type in the dissertation extends the range of activity in case of any limits in the type of jurisdiction. The concept of NAFTA’S GREEN IMPACT itself, based on NAAEC’s opportunities as a relatively fixed background, allows various aspects of the legal framework to be flexibly applied. The semi-type thereby forms the basis for any combination between legal background and greening concept.

## 2.2 Greening NAFTA

During the 1990s, when the quantity of trade agreements suddenly increased, public concern about their environmental impacts reached new heights. These fears spurred positive change in the requirements for trade agreements, in that the ratification and operation of agreements now demanded a green liberalization process.

In the relation of environmental assessment to trade, experts agree on the need for and the advantages of both ex-ante and ex-post assessment, which together create a complete cycle in trade assessment yet which are, at present, usually applied separately. Quotations from Altmann (2002 “Integration of Environmental Aspects in Regional and Inter-regional Trade Agreements”), Cordonier et al. (1999 “Trade rules and sustainability in the Americas”) and Gehring (2007 “Sustainable development through process in world trade law,” translated title<sup>19</sup>) shall serve as examples here, as they cite scientific expertise spanning the past ten years.

Altmann refers to the general opportunities that trade assessments may provide (underlines added for emphasis by the author):

“Although hardly any free trade agreements refer to them explicitly, there are other **problematic areas** which are relevant to environmental policy [..., for example] [e]nvironmentally-relevant planning and prognosis capacity with regard to the evaluation of environmental effects in terms of *Environmental Impact Assessment*” (2002: XVII).

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<sup>19</sup> Nachhaltigkeit durch Verfahren im Welthandelsrecht.

Altmann uses the term “Environmental Impact Assessment” as a synonym for trade environmental assessment and thus points to its possible influence on environmental policy.

In addition, he (2002: XXV) emphasizes the need to combine ex-ante and ex-post assessments, as “[a] regional free trade agreement should be based on a prior Environmental Impact Assessment, and should provide for continuous environmental monitoring.”

In contrast to Altmann’s general support for environmental trade assessments, Cordonier et al. (1999: 17 ff) are more explicit in their recommendations for the Free Trade Area of the Americas (FTAA). This agreement was designed to encompass almost all North and South American countries (see Chapter 5.1.3, at present the FTAA is no longer being pursued). In their “Principles in practice for a potential FTAA,” the authors summarize the objectives of environmentally-friendly trade agreements that can be reached by applying trade environmental assessment (underlines added by author):

“**Environmental integrity:** How can we identify and respect limits to the regenerative capacity of ecosystems, avoid irreversible harm to plant and animal populations and species and ensure protection for valued and endangered areas through a more developed hemispheric trade regime? [...]”

- Conduct an environmental assessment of the proposed trade agreement.”

Additionally, Cordonier et al. emphasize the precautionary principle, which is supported by scientific analysis (underlines added by author):

“**Science and precaution:** How can developing trade regimes respect the precautionary principle? How can objective criteria in science promote better long-term decisions and how can short-term needs be balanced against the lack of scientific certainty? [...]”

- Embrace the precautionary principle in trade treaties and related infrastructure projects. [...]

- Build expertise, systems and transparency to ensure precautionary regulatory decisions on all levels.”

Gehring (2007: 110) concludes in a review of the first phases of Canadian ex-ante trade assessments (see Chapter 4.3.1.1), that these domestic assessments should be applied “retrospectively.”

On the basis of these citations, three statements can be made: **first**, the need for trade agreements to be environmentally friendly; **second**, trade-related environmental assessments are necessary in order to assess to what extent trade agreements are environmentally friendly; and **third**, scientific expertise builds and the precautionary principle sets the basis for better decision-making regarding environmental protection within trade agreements.

The dissertation combines these three observations in the wider context of environmental assessment as part of addressing how the precautionary principle is

related to greening NAFTA and thus to environmental friendliness. The following sub-chapter defines the criteria for greening NAFTA, as the central trade agreement in the dissertation, in relation to the instrument of environmental assessment; it then presents an independent variable for testing the success of the accord's green development.

### 2.2.1 Dependent Variable: Key Statement of Criteria for "Greening NAFTA"

As the international experience with trade liberalization demonstrates, increased participation in world trade is often accompanied by negative and positive impacts on the environment of the signatory country or its neighboring countries (see Chapters 5, 8).

The International Association for Impact Assessment (IAIA) (2009: 1), one of the central societies for the assessment and evaluation of impacts in general, describes the term "impact" as follows: "The 'impact' is the difference between what would happen with the action and what would happen without it." Environmental assessment focuses on environmental components. The Analytic Framework for Assessing the Environmental Effects of the North American Free Trade Agreement (henceforth referred to as Analytic Framework or Framework) (see Chapters 2.2.2, 7.3.2.1.1) embraces in its analyses the following five topics as central environmental components:

- air,
- water,
- land,
- biota, comprising flora, fauna and human population, and
- aggregate indicators.

The Analytic Framework is chosen as a reference for defining environmental components for two reasons. First, the Framework is closely related to NAFTA, which is the free trade agreement central to this analysis. Second, the Framework is a scientifically accepted methodological approach to assessing environmental effects (as it was elaborated in a scientific discourse; CEC 1999a, id.: iii ff); therefore, it can be assumed to completely cover all relevant environmental media related to trade assessment. Thus for the purposes of this dissertation, **an environmental impact of NAFTA is defined as any impact on air, water, land, biota and their aggregate indicators caused by the trade agreement.** Drawing on this definition and relevant interview information, Box 1 names the key statement for defining the green status of NAFTA and thus determining the dependent variable.

### Box 1: Key Statement: Greening NAFTA

(author's definition, deducted from Expert J, Expert M, supported by Expert O, CEC 1999a: iii, 2, 29, 35, 45)

1. NAFTA can be regarded as green, when:
    - a. the positive and negative environmental impacts are identified by means of a scientific methodology including monitoring, in order to identify the variety of impacts and to make use of the results of positive as well as negative impacts,
    - b. NAFTA does not cause any negative impacts, either by mitigating them or by balancing them against positive ones.
  2. The following two activities contribute to the greening of NAFTA:
    - a. reduction of the negative environmental impacts of NAFTA in order to apply the precautionary principle, and
    - b. increase of the positive environmental impacts of NAFTA in order to intensify the dimension of the positive impacts that result from NAFTA.
- Both activities interact, in that reducing the negative impacts may be accomplished by increasing the positive ones and vice versa.

During the research, no explicit requirements for greening NAFTA could be identified. The elements of the key statement were generated out of interviews with Expert J and Expert M and supported by Expert O and the Analytic Framework, which states that one of its central objectives is “to develop policy tools to better mitigate negative impacts and maximize positive ones” (CEC 1999a: iii). The interviewees articulated a need to identify the positive as well as the negative environmental impacts of NAFTA and of trade agreements within the context of environmental and sustainability impact assessment. In order for the results of such assessments to appropriately and effectively harmonize NAFTA and the environment, recognition of positive impacts is essential. The key statement thus expands upon existing approaches to environmental assessment, which usually focus on the mitigation of negative environmental impacts (see Chapter 4) by demanding increases in positive environmental impacts.

Both elements of the key statement – the requirements and the activities for greening NAFTA – will be discussed in Chapters 6 and 7 and form a central element for NAFTA'S GREEN IMPACT (Chapter 8).

### 2.2.2 Independent Variable: The Analytic Framework for Identifying the Success of “Greening NAFTA”

In the past decade, the assessment of trade agreements has continuously gained importance. Both domestic and institutional approaches to identifying environmental or sustainability impacts of trade agreements exist (see Chapter 4.3). The ongoing ex-post environmental assessment of NAFTA has been chosen as a measuring instrument to determine NAFTA's environmental impacts. The assessment is based on NAAEC's Article 10.6(d), which stipulates that “the environmental effects of the NAFTA” must

be considered through the CEC Council “on an ongoing basis” (see Chapter 7.3). In compliance with this mandate, the CEC developed a scientifically tested guideline for assessing NAFTA’s environmental impacts, namely the Analytic Framework for Assessing the Environmental Effects of the NAFTA (see Chapter 7.3.2.1.1). Box 2 summarizes the central elements of the analysis. (Chapter 7.3.2.1.1 provides further details on these topics.)

Box 2: Key Reference: Analytic Framework for Assessing the Environmental Effects of the North American Free Trade Agreement

(CEC 1999a)

**NAFTA Connection of sectors and issues**

- NAFTA Rule Changes
- NAFTA’s Institutions
- Trade Flows
- Transborder Investment Flows
- Other Economic Conditioning Forces

**Linkages to Environment**

- Production, Management and Technology
- Physical Infrastructure
- Social Organization
- Government Policy

**Environmental Impacts and Indicators**

- Air
- Water
- Land
- Biota
- Aggregate indicators

Based on the Analytic Framework, the CEC presented 49 case studies on the environmental impacts of NAFTA at its topic-related Symposia and published them partly or completely on the CEC homepage (CEC 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05, see Chapter 7.3.2.1.2 f, see Annex III for a list of the studies). Selected studies serve as a reference framework for analyzing the increase and decrease of NAFTA’s environmental impacts in the respective sub-chapters (see Chapters 7.3.2.1.2, 8.2, 8.4). As the studies do not necessarily cover all environmental, regional and policy aspects relevant to the dissertation, Chapter 8 also suggests the identification of increases in positive environmental impacts and decrease of negative ones under

NAFTA as a possible subject for further study.

The ex-post assessment of NAFTA is the only existing – even partly legally binding – procedure to identify the environmental effects of NAFTA on an ongoing basis (Carpentier 2006: 260). No other ex-post assessment of trade agreements and methodological framework, therefore, can be applied as an independent variable to work with the hypothesis.

The instrument of the NAFTA environmental assessment thus plays a double role within the dissertation. First, the procedure itself, including its legal, political and practical framework, is a central part of the research analysis. Second, the methodology for analyzing NAFTA's environmental impacts serves as the independent variable in the hypothesis.

## **PART A: Background Facts**





### 3 Canada, the US and Mexico

This chapter presents basic facts about NAFTA's signatory countries: Canada, the United States and Mexico. It focuses on three aspects: governmental structure of the countries, economy/trade and environmental protection on the domestic level<sup>20</sup>. The chapter also pays particular attention to the border areas.

Figure 4: The political map of North America

(CEC, no date: North American Environmental Atlas, layer Bathymetry, Shaded Relief, Political Boundaries, no scale)



<sup>20</sup> The chapter mainly focuses on data that was equally available for all three countries. The CEC's general comparison of basic information for all three countries forms the basis of this chapter. The trilateral analysis of the CEC helped to identify the key environmental institutions and elements in each NAFTA country and allows for a trilateral and explicit comparative description in this chapter. All monetary values (US\$) based on the CIA Factbook are estimates.

### 3.1 Canada

Canada – together with the US state of Alaska – is the most northern country in North America. It has a total surface of 9,984,670 sq km. Its neighbor is the US, with whom it shares two borders totaling 8,893 km in length (2,477 km of which is the Canadian-Alaskan border). Canada has a population of 33,212,696 inhabitants (CIA Factbook 2008: Canada) and a population distribution of 3 inhabitants per sq km (World Atlas 2006: Countries of the World). The majority of the population, however, lives along the southern border area between the US and Canada (Expert R). The official languages are English and French (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Canada: 1).

Canada is a “constitutional monarchy that is also a parliamentary democracy and a federation.” The country consists of 10 provinces and 3 territories,<sup>21</sup> with Ottawa as the federal capital (CIA Factbook 2008: Canada).

Canada’s legal system is mainly based on English common law (CIA Factbook 2008: Canada), and includes a federal government as well as provincial and territorial governments. The federal level is responsible for, among other things, international trade and defense. The Constitution assigns areas of jurisdiction to the subnational governments. Over certain matters, the federal and provincial governmental levels share responsibility, for instance in the case of agriculture and selected tasks having to do with natural resources (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Canada: 1).

#### 3.1.1 Economy and Trade

In 2008, Canada’s gross national product (GNP) amounted to 1,400,091 million dollars US, which equals a per capita GNP of US\$ 28,681 (2006-2008) (WTO 2009: Trade Profiles Canada). Canada’s economy has a real growth rate of 2.7% (CIA Factbook 2008: Canada). Central branches of industry include transportation equipment, chemicals, processed and unprocessed minerals, as well as petroleum and natural gas (not ranked, CIA Factbook 2008: Canada).

Canada ranks number 11 in the world in merchandise exports and imports. In 2008, Canadian merchandise exports amounted to US\$ 456,464 million US f.o.b., of which 77.6 % was exported to the US (ranked 1st) and 1.2 % to Mexico (ranked 5th) (WTO 2009: Trade Profiles Canada), as Table 3 illustrates. Export commodities constituted, inter alia, motor vehicles and parts, industrial machinery, crude petroleum, natural gas, electricity and aluminum (not ranked, CIA Factbook 2008: Canada). Canadian merchandise imports were valued at 418,311 million US c.i.f. in 2008. The majority of imports originated in the US (52.4 %, ranked 1st) and 4.1 % from Mexico (ranked 4th)

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<sup>21</sup> Provinces and territories differ, for example, in their constitutional status (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Canada: 1). In the dissertation they are both integrated into the term “state” when referring to the subnational level and are usually not mentioned separately.

(WTO 2009: Trade Profile Canada). Heavily imported were machinery and equipment, motor vehicles and parts, crude oil and electricity (not ranked, CIA Factbook 2008: Canada).

Table 3: Canada's percentage of its international trade (2008)

(WTO 2009: Trade Profile Canada)

<b>Export</b>	<b>%</b>	<b>Import</b>	<b>%</b>
1. United States	77.6	1. United States	52.4
2. European Union (27)	7.5	2. European Union (27)	12.5
3. Japan	2.3	3. China	9.8
4. China	2.2	4. Mexico	4.1
5. Mexico	1.2	5. Japan	3.5

Besides NAFTA, Canada signed further free trade agreements, for example with Chile and Costa Rica (Foreign Affairs and International Canada 2007: Regional and Bilateral Initiatives) and is a member of the WTO (1995) (WTO 2008: Members and Observers). In addition, the country is in negotiations on free trade agreements with the European Free Trade Association (EFTA) and the countries of the Andean Community (Foreign Affairs and International Canada 2007: Regional and Bilateral Initiatives). Canada has, moreover, established and continues to establish the following:

- Foreign Investment Protection and Promotion Agreements (FIPAs), for example with Hungary (id. 2002: Listing of Canada's existing FIPAs),
- Trade and Investment Cooperation Arrangements (TICAs), for instance with the Republic of South Africa,
- Trade and Economic Cooperation Arrangements (TECAs), inter alia, with Norway (id. 2006: Regional and Bilateral Initiatives, Trade and Investment Cooperation Arrangements (TICAs)/Trade and Economic Cooperation Arrangements (TECAs)), and
- a Memorandum of Understanding on Trade and Investment with Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua (id. 2008: Regional and Bilateral Initiatives, Memorandum of Understanding on Trade and Investment (MOUTI)).

Despite the quantity and variety of different trade agreements, the high percentage of trade exchanged through NAFTA has a significant effect on Canada's economy. The US and Mexico and thus both NAFTA partners therefore hold 4/5 respectively 2/3 of Canadian merchandise trade, whereas the majority originates from trade with the US.

### 3.1.2 Environment

Environment Canada is the federal environmental ministry (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Canada: 2, Expert H). Other federal agencies addressing specific tasks in the field of environmental protection include the Canadian Environmental Assessment Agency (CEAA) (see Chapter 4.1.1) and Parks Canada (Expert H).

At present, the Canadian Environmental Protection Act forms the basis for environmental protection on the federal level. Regulations such as the Fisheries Act are engaged with particular industries. The departments, for example Justice Canada as well as Foreign Affairs and International Trade, also integrate environmental aspects into their work. The Commissioner of the Environment and Sustainable Development is additionally charged with overseeing environmental matters. The departments outline strategies on sustainable development that are within their scope and mandate (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Canada: 2).

Environmental protection is not explicitly part of the Canadian constitution (id.: 1.1): “Due to the federal-provincial nature of the Canadian political system, there is no single national statute providing a global framework for the protection of the Canadian environment” (id.: 4). Each province and territory has created an individual legislation to address environmental issues within its boundaries. These legislations are “significantly different in each province and territory” (id.: 4.2). The federal and the subnational level share the responsibilities over the environment (CEC 1998: 8).

Several initiatives have been devised to improve cooperation between the governmental levels. One of these, the Canadian Council of Ministers of the Environment, was designed to coordinate environmental cooperation between the federation and the subnational level, with the goal of harmonizing environmental regulations and adopting common strategies towards environmental protection. The governments, however, are not required to heed the suggestions and recommendations established by the Council of Ministers (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Canada: 2, 4). In this same vein, Canada enacted the country-wide Accord on Environmental Harmonization of 1998, in which provincial or territorial governments work towards an implementation of certain sub-agreements, for example, agreements dealing with Canada-wide standards (id. 4).

## 3.2 The US

The territory of the United States of America (here the continental US) comprises a total of 9,826,630 sq km. It shares two borders with Canada and a border with Mexico (3,141 km), which together add up to 12,034 km. In the US, 307,212,123 inhabitants (CIA Factbook 2008: United States) are distributed at a density of 31 inhabitants per sq km (World Atlas 2006: Countries of the World). The national language is English, but Spanish is also partly spoken (Auswärtiges Amt 2009: USA/Vereinigte Staaten).

The US is a “[c]onstitution-based federal republic” consisting of 50 sovereign states plus the District of Columbia, where the federal capital, Washington DC, is located. Like Canada, the US legal system is mainly based on English common law (CIA Factbook 2008: United States).

All duties that the US Constitution does not explicitly define as federal duties are left to the jurisdiction of the individual states or the people (CEC 2003: Publications and Information Resources - Summary of Environmental Law in the United States: 1). On the subnational level, each state has an individual legal system (CIA Factbook 2008: United States). The states, therefore, retain their sovereignty to a substantial degree. In cases where federal and state regulations overlap, federal or international laws are usually superior to any other law (CEC 2003: Publications and Information Resources - Summary of Environmental Law in the United States: 1).

### 3.2.1 Economy and Trade

The US GNP amounted 14,204,322 million dollars US in 2008, which corresponds to a per capita GNP of US\$ 13,066 (2006-2008) (WTO 2009: Trade Profiles United States). The economic growth rate is 2.2% (CIA Factbook 2008: United States).

In 2008, the US ranked number 3 in merchandise exports and number 1 in merchandise imports in the world. Merchandise exports amounted 1,287,442 million dollars US f.o.b., of which 20.1% was trade with Canada (ranked 2nd) and 11.7% with Mexico (ranked 3rd) (WTO 2009: Trade Profiles United States), as illustrated in Table 4. Main export products include industrial supplies, consumer goods, capital goods and agricultural products (CIA Factbook 2008: United States).

Merchandise imports in 2008 were valued at 2,169,487 million dollars US c.i.f.; 15.7% of which was imported from Canada (ranked 3rd) and 10.1% from Mexico (ranked 4th) (WTO 2009: Trade Profiles United States). Main imports are agricultural products, industrial supplies and capital goods (id.).

Table 4: US Percentage of its international trade (2008)

(WTO 2009: Trade Profiles United States)

<b>Export</b>	<b>%</b>	<b>Import</b>	<b>%</b>
1. European Union (27)	21.2	1. European Union (27)	17.4
2. Canada	20.1	2. China	16.5
3. Mexico	11.7	3. Canada	15.7
4. China	5.5	4. Mexico	10.1
5. Japan	5.1	5. Japan	6.6

Besides NAFTA, the US is part of other trade agreements, for instance the Jordan Free Trade Agreement and the Central America-Dominican Republic-United States Free Trade Agreement (US-CAFTA-DR, encompassing the US, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and the Dominican Republic (Office of the United States Trade Representative 2009: CAFTA-DR (Dominican Republic-Central America

FTA)). The US is also a member of the WTO (Office of the United States Trade Representative, no date: Trade Agreements + link to the respective trade agreement). Furthermore, the US works with:

- Bilateral Investment Treaties (BITs), for example with Rwanda (id.: Bilateral Investment Treaties (BITs), id. 2009: BIT Documents), and
- Trade and Investment Framework Agreements (TIFAs), for instance with Afghanistan and Angola (id., no date: Trade and Investment Framework Agreements (TIFAs)).

In sum, US trade differs from that of Canada and Mexico in that it is distributed among many trading partners and also comprises countries outside the NAFTA. As they account for only 1/3 (Canada) and 1/4 (Mexico) of the country's total merchandise trade, the NAFTA partners dominate the US economy to a lesser degree than is the case for Canada and Mexico (see Chapter 3.3).

### 3.2.2 Environment

The US has a federalist system, consisting of fifty states with a high level of sovereignty, autonomy and authority that is also reflected in environmental terms, even though “[t]he federal Constitution, federal laws, and international treaties are supreme to state or local law” (CEC 2003: Publications and Information Resources - Summary of Environmental Law in US: 1).

The National Environmental Protection Act (NEPA) establishes the foundation for federal environmental protection (id.: 2), and was the wellspring for one of the two relevant federal governmental institutions: the Council on Environmental Quality (CEQ), an outcome of NEPA (Wood 2003: 18), provides assistance and advice to the President, promotes environmental quality and develops national environmental strategies. The second relevant federal institution is the US Environmental Protection Agency of 1970, the highest environmental administrative organ in the US and the lead agency for “implementing most environmental protection laws”. Its main task is to enforce environmental programs and strategies (CEC 2003: Publications and Information Resources - Summary of Environmental Law in US: 2). The US does not have an independent environmental ministry (Expert M).

The US State Department usually represents the US in international negotiations for environmental conferences and treaties (Expert M). The EPA, however, is the leading agency in the NAAEC (see Chapter 6.1).

On the subnational level, the environmental protection agencies are charged with similar tasks as their federal counterparts (CEC 2003: Publications and Information Resources - Summary of Environmental Law in US: 2). Many states have some kind of environmental regulation, but not all states have legislation similar to NEPA (Expert I).

### 3.3 Mexico

Mexico – officially the United Mexican States – has a territory of 1,972,550 sq km. It is bordered by the US to the north and by Guatemala (962 km) and Belize (250 km) to the south. Mexico has 109,955,400 inhabitants (CIA Factbook 2008: Mexico) with a population distribution of 54 inhabitants per sq km (World Atlas 2006: Countries of the World). About 20% of the Mexican population lives along the northern border with the US (Expert D with CIA Factbook 2008: Mexico and estimations by Peach and Williams 2003). The official language is Spanish (Auswärtiges Amt 2008: Mexiko).

Mexico is a federal republic with the Mexico Federal District as its capital. The country consists of 31 states plus the Federal District. The legal system is a “mixture of US constitutional theory and civil law system” (CIA Factbook 2008: Mexico). The native population receives special rights and protected status (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Mexico: 1).

Any task that the Constitution does not assign to the federation may be taken up by the states as their individual area of responsibility. Coordination agreements between the federal and the state level also come into play (id.: 1.1).

#### 3.3.1 Economy and Trade

In 2008, Mexico’s GNP amounted to 1,085,951 million dollars US. The per capita GNP was calculated at US\$ 5,643 (2006-2008) (WTO 2009: Trade Profiles Mexico), with a real growth rate of an estimated 3% (CIA Factbook 2008: Mexico). Mexico has the biggest national economy in Latin America (since 2001; Sangmeister, Melchor del Río 2004: 67); however, it is partly still considered a less developed country/ developing country though in transition to a “newly industrialising country” (Altmann 2002: 97) in general as well as concerning its role in the NAFTA negotiations (Ortiz Mena L.N. 2006: 177, Expert S). Important industries include, for example, food and beverages, chemicals, petroleum, mining, clothing and motor vehicles (not ranked; CIA Factbook 2008: Mexico).

With respect to international trade, Mexico ranked number 14 and 16 worldwide in merchandise imports and exports. In 2008, merchandise exports from Mexico amounted to an estimated US\$ 291,729 million f.o.b., imports to US\$ 323,151 million c.i.f. (WTO 2009: Trade Profiles Mexico). The country mainly exports manufactured goods, oil and oil products, silver, fruits, vegetables, coffee and cotton. It mainly imports metalworking machines, steel mill products, agricultural machinery, electrical equipment, car parts for assembly, repair parts for motor vehicles, aircraft, and aircraft parts (not ranked, CIA Factbook 2008: Mexico).

Table 5: Mexican percentage of its international trades (2008)

(WTO 2009: Trade Profiles Mexico)

<b>Export</b>	<b>%</b>	<b>Import</b>	<b>%</b>
1. United States	80.3	1. United States	49.2
2. European Union (27)	5.9	2. European Union (27)	12.7
3. Canada	2.4	3. China	11.2
4. Brazil	1.2	4. Japan	5.3
5. Columbia	1.0	5. Republic of Korea	4.4

As the Table 5 shows, Mexico's most important trading partner is the US: it exports 80.3% of its merchandise products to the US and imports 49.2%, while Canada is ranked number 3 on the export side with 2.4% and is not even part of the top 5 on the import side (WTO 2009: Trade Profiles Mexico).

Besides NAFTA, Mexico has signed other trade and trade-related accords, including trade agreements with Costa Rica, Bolivia, El Salvador, Guatemala, and Honduras (2001), and an accord with the European Free Trade Association (EFTA)) (Secretaría de Economía, no date: Comercio Exterior y TLC). Mexico is also a member of the WTO (1995) (WTO 2008: Members and Observers).

A distinctive part of the Mexican economic landscape is the industrial branch known as the maquiladora industry.<sup>22</sup> Maquiladoras are "in-bond factories that produce exclusively for export" (Hufbauer, Schott 2005: 46). US companies can import their partly finished products to Mexico for final assembly and then re-import them to the US. Originally, duties have to be paid only on the assembled parts of the products (Altmann 2002: 141 f). The maquiladoras employ about 45% of all employees in the manufacturing branch (2003; Hufbauer, Schott 2005: 46), thereby producing approximately 50% of the manufactured goods destined for export (id: 469 f). Maquiladoras had become notorious for highly polluting production processes; for example, maquiladora production processes involve dangerous contaminants such as toxic waste or hazardous techniques (Markell, Knox 2003: 3, Tamayo, Tamayo 1995: 155).

Originally, the free trade area provided for the maquiladoras was limited to a 200 km zone along the US-Mexican border and is now extended to the entire Mexican territory (Altmann 2002: 141). The regional focus, however, is still the border area (Expert D).

<sup>22</sup> Also maquilas. The maquila program was established through the National Border Program of 1965 and did not originate from NAFTA or NAFTA negotiations (Altmann 2002: 140).



### 3.3.2 Environment

The General Law of Ecological Balance and Environmental Protection is presently used as the basis of federal environmental protection in Mexico (Ley General del Equilibrio Ecológico y la Protección al Ambiente (LGEEPA) of 1988, main reform 1996; hereafter referred to as the General Law). Mexico's environmental ministry is the Secretariat of the Environment and Natural Resources (Secretaría del Medio Ambiente y Recursos Naturales SEMARNAT), which cooperates with several autonomous agencies, including the National Institute of Ecology (Instituto Nacional de Ecología INE) and the Federal Attorney General for Environmental Protection (Procuraduría Federal de Protección al Ambiente PROFEPA). The National Institute of Ecology is empowered to support environmental strategies through technical and scientific strategies and to prepare environmental studies for analysis. The Federal Attorney General for Environmental Protection enforces environmental regulations (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Mexico: 2).

Each Mexican state has individual environmental laws that are enforced by their state governmental bodies. These laws include aspects that are not defined as federal responsibilities under the General Law (id.). The federal government can create "coordination agreements or compacts with the states or the federal district in order for them to take on specific duties" (id.: 1.1). Due to the priority position of the superior state levels, overlapping jurisdictional powers are uncommon.

## 3.4 Border Issues

Canada, the US and Mexico are direct neighbors, but only the US shares borders with the other two. Three borders exist between the North American countries (search on googlemaps, see Figure 4):

- the northern Canadian-US border (two Canadian states<sup>23</sup>: Yukon Territory, British Columbia; one US state: Alaska)
- the southern Canadian-US border (six Canadian states: Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick; ten to sixteen US American states: Alaska, Washington, Idaho, Montana, North Dakota, Minnesota, New York, Vermont, New Hampshire, Maine as rather direct border states, and Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania as neighbor states through the Great Lakes), and
- the US-Mexican border (four US American states: California, Arizona, New Mexico, Texas; six Mexican states: Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon, Tamaulipas).

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<sup>23</sup> All states from East to West.

## Environment

Long before NAFTA entered into force, binational cooperation among the three countries was cultivated through the ratification of **agreements** and the creation of respective **institutions**. In sum, two environmental media are key focal points for cooperation along both country borders: air and water (Tweedie 2006: 857 f).

The US-Mexican border area is governed by bilateral environmental agreements such as the Border Environment Agreement (hereafter referred to by its unofficial name, “La Paz Agreement”) (1983) (Ludwiszewski, Seley 1996: 19). At present, the Border XXI Program with its Border 2012 activities plays a central role in the development of environmental border cooperation. It encompasses 100 km on both sides of the border (U.S. Environmental Protection Agency 2009: US-Mexico Border 2012 Program). Regional and task-specific cooperation initiatives also exist, for instance, the Joint Advisory Committee for the Improvement of Air Quality (Joint Advisory Committee for the Improvement of Air Quality 2008), as well as general forms of subnational cooperation such as the Border Governors which also comprises the environment (e.g. 24th United States-Mexico Border Governors Conference 2006: Joint Declaration).

Canada and the US cooperate bilaterally in numerous ways, one of which is via the bilateral International Joint Commission (IJC) (International Joint Commission 2009: About us). Key topics of environmental cooperation were and are water quality – partly addressed by this Commission – and air pollution/ acid rain (Tweedie 2006: 858).

The various types of cooperation differ according to the special characteristics of institutions, agreements and border needs. The binational cooperation will be briefly illustrated using water as an example. The US-Mexican border is characterized by water scarcity due to the arid climate. The two countries created domestic institutional counterparts, the US International Water and Boundary Commission (IBWC) and the Mexican Comisión de Límites y Aguas (CILA) (Tweedie 2006: 858 f). In contrast, water quality is of central concern along the Canadian-US border due to the Great Lakes; these concerns are addressed, among others, by the bilateral International Joint Commission (International Joint Commission 2009: About us, Tweedie 2006: 858 f).

Additional bilateral activities unrelated to air and water are realized under the auspices of the Security and Prosperity Partnership (see Chapter 5.3).

## Population and Economy

The southern Canadian and northern Mexican border are densely populated industrial zones. Additionally, the US-Mexican region is known for the flourishing maquiladora industry on the Mexican side of the border, which has strongly influenced the development of the Mexican population on that side of the border. By the mid-1990s the Mexican population in the border region had doubled on account of the maquiladoras (Ludwiszewski, Seley 1996: 18 f). Construction of houses and small, unofficial settlements (“colonias”) on both sides of the border appear to be largely spontaneous and unplanned, which leads to infrastructure problems (lack of sewage or drinking treatment facilities) and substandard housing (Tamayo, Tamayo 1995: 161). In

combination with the lax environmental standards characteristic of the Maquildoras, these circumstances “severely overtaxed the border environment” (Ludwiszewski, Seley 1996: 18). Even today, “serious air and water pollution in the [...] urban centers along US-Mexico border” continues to be a problem (CIA Factbook 2008: Mexico). As part of the NAFTA negotiations, the US and Mexico established the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADBank) as two sister institutions addressing selected environmental issues along the border (see Chapter 5.2.2).

### 3.5 Summarizing Discussion

This chapter compared selected aspects of governmental, economic and environmental domestic regulations and activities in Canada, the US and Mexico. The three countries are united in the high level of autonomy they grant to their states. They differ, however, in the types of cooperation that exist among their governmental levels. All three countries also have extensive domestic environmental regulations that differ according to the governmental level responsible for enforcing them. These distinctive governmental structures and the various ways in which the federal and subnational levels interrelate are likely to complicate trilateral and transboundary cooperation, which may also affect the subnational as well as the federal levels. In addition, due to their lack of shared borders, there exists a weaker connection between Canada and Mexico as between Canada and the US and the US and Mexico, respectively ( see also Expert G).

Major disparities also exist among the three countries with regard to economic development. These differences are reflected in the GNP statistic, which reveals Mexico’s comparatively weak position. Although all three countries have signed additional trade agreements, both Canada and Mexico are highly dependent on the US for their trade flow. In contrast, export-import traffic between the US and both of its neighbors accounts for only approximately one third of US trade. This economic dependency in relation to the large amount of trade under NAFTA in general (see Chapter 5.1) highlights the importance of the agreement for all three signatory countries.

Cooperation among the countries has historically been mainly transboundary in nature. The three countries have engaged intensively in activities involving bilateral cooperation, focusing thereby on topics of common concern. Trilateral cooperation, however, has played an inferior role in past decades. Trilateral cooperation under the auspices of NAFTA, and especially environmental cooperation under NAAEC, thus represents a new step in relations among the signatory countries with regard to the environment.



## 4 Central Approaches to Environmental Assessment in North America

The general idea of assessing environmental impacts – and in the scope of the dissertation comprising the variety of types of the instrument of environmental assessment itself as it is presented in this chapter – traces back to the year 1969, when the US implemented the National Environmental Policy Act (NEPA), which legally integrated the instrument for the first time (Wood 2003: 1 ff).<sup>24</sup> In the past four decades, environmental assessment has become part of many national legislations and international treaties, institutions and commitments. In this dissertation, the following types of key environmental assessments are:

- environmental impact assessment on the project level (project EIA),
- transboundary environmental impact assessment on the project level (transboundary EIA) as a possible component of the domestic project EIA,
- strategic environmental assessment of plans, policies and programs (SEA) including
  - o environmental assessment of trade agreements as a special type of SEA (environmental assessment of the respective trade agreement, for example NAFTA EA) and
  - o transboundary SEA for policies, plans and programs as a possible component of the domestic SEA.

These types of environmental assessment were selected according to their references in the NAAEC (see Chapter 7) and North American national and international approaches to the instrument. In general, the environmental assessment of projects has a long tradition in environmental science, whereas mainly in the past one to two decades has the instrument extended its focus from the project level to the strategic and spatial level in order to implement the SEA. Thus the basic concerns of this chapter are a general overview over EIA and SEA and their transboundary components, without any detailed discussion of differences between SEA and EIA procedures.

The description thereby focuses on the legal framework and the relevant parts of environmental assessment in North America.<sup>25</sup> The information sets the foundation for

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<sup>24</sup> In this chapter, literature mainly on project EIA and SEA for policies, plans and programs in general is used to provide a basic overview of environmental assessment and to summarize its objectives and steps. During the interviews, many experts expressed a wide range of possible interpretations of the term environmental assessment (see Chapter 7). However, the instrumental form of the project, policy, plan and program level is a key element of the research. Further features of the instrument exist that are not addressed in this dissertation, for example, risk assessment and assessment of specific biotopes.

<sup>25</sup> The information was mainly drawn from the homepages of the responsible governmental institutions and the CEC research (mainly CEC 1998, CEC 2003: Publications and Information Resources - Summary of Environmental Law + respective country). Several expert interviews and the previous diploma thesis of the author on the Mexican EIA (Podhora 2003) clarified special domestic characteristics. The chapter does not aim to compare domestic legal requirements and applications, but

a better understanding of the later analysis of environmental assessment as part of the NAAEC (see Chapter 7). The focus of this chapter also centers on aspects of EA that play a relevant role in the concept of NAFTA'S GREEN IMPACT (see Chapter 8).

As the approaches to environmental assessment are varied, all responsible authorities use different terms for the instrument and apply the main steps based on individual priorities and spheres of interest (Wood 2003, id.: 4 f, 32).<sup>26</sup> Despite these differences, environmental assessment does have commonly accepted core objectives and key steps.

The general goal of environmental assessment is to identify the consequences that a certain project, plan, policy or program has on the environment. The assessment usually analyzes the impacts on various environmental attributes. A neutral source not related to one of the NAFTA countries that can be referenced here is the German Law on Environmental Impact Assessment, which focuses on project EIA and enumerates the following entities:

- “1. Human beings including human health, fauna, flora and biodiversity,
  - 2. soil, water, air, climate and landscape,
  - 3. cultural assets and other tangible assets,
  - 4. interaction between the previously mentioned subjects of protection”
- (Gesetz über die Umweltverträglichkeitsprüfung, direct translation by the author).

Thus in addition to purely environmental factors, the analysis may also include effects on human beings, assets demanding special protection and sustainability issues (id., Glasson et al. 2005, Morris, Therivel 2009, Dalal-Clayton, Sadler 2005, Köppel et al. 2004a, Wood 2003).

In general, environmental assessment procedures consist of two basic parts, an ex-ante and an ex-post analysis; however, the steps presented here are mainly drawn from the project EIA and are not always as strictly defined in the SEA process. As the key elements are relevant for an explanation of environmental assessment, the steps of the project EIA will be applied here. The ex-ante analysis is conducted prior to the realization of the project and the application of the policy, plan or program and initiating these types of environmental assessment are under the responsibility of the proponents of the activity. The ex-ante analysis usually consists of six steps:

- 1) A screening that identifies the actual need for an environmental assessment,
- 2) a scoping to define the frame of the assessment,
- 3) an environmental impact statement (EIS)<sup>27</sup> as an analysis of the possible environmental impacts through a report in order to mitigate the effects, based

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to provide a general overview as a basis for the dissertation.

<sup>26</sup> For example, for the analysis of countries with domestic project EIA see, among others, Sadler 2005, Dalal-Clayton, Sadler 2005, Köppel et al. 2004a; see Sub-chapters 4.

<sup>27</sup> This term is used in this thesis to harmonize the different domestic terms in the NAFTA countries.

on the project's characteristics and the different environmental factors,

- 4) the opportunity for public participation and governmental consultation to be incorporated into the environmental impact statement,
- 5) an evaluation of the environmental impact statement by a competent authority,
- 6) a final statement and permit issued by the responsible governmental authority based on the evaluation of the environmental impact statement and the public and governmental comments (Glasson et al. 2005: 87 ff, Wood 2003: 6 f, both adapted).

The ex-post analysis is conducted after the realization of the project and the application of the policy, plan or program. Steps 7 and 8 are part of a follow-up and are sometimes regarded as optional:

- 7) the monitoring of the results that were identified in the environmental impact statement and mentioned in the final statement, and
- 8) integration of the monitoring results into the project, policy, plan or program (Wood 2003: 6 f, adapted).

The analysis itself is conveyed through a report, commonly known as an environmental impact statement. These statements have different foci according to the scope of the instrument. The EIA usually focuses on projects (project EIA), for example roads, industrial production sites, and power plants (see Chapter 4.1). In contrast, the SEA focuses on the macro level by analyzing policies, plans and programs (see Chapter 4.2). Both types of environmental assessment are applied ex-ante and thus prior to the realization of the project or the implementation of the policy, plan or program. As the analysis of the SEA takes place prior to the planning and evaluation process of the actual projects, it guides an overarching process designed to avoid the possible environmental impacts that might have occurred had the assessment only begun at the project level (see Figure 6)<sup>28</sup>. Cumulative effects caused by several industries within a region can be identified in an SEA for plans rather than in individual project EIAs (see Chapter 4.2). In terms of an SEA that focuses on policies and programs, the connection and thus the influence on the project level is less explicit and obvious (Expert H).

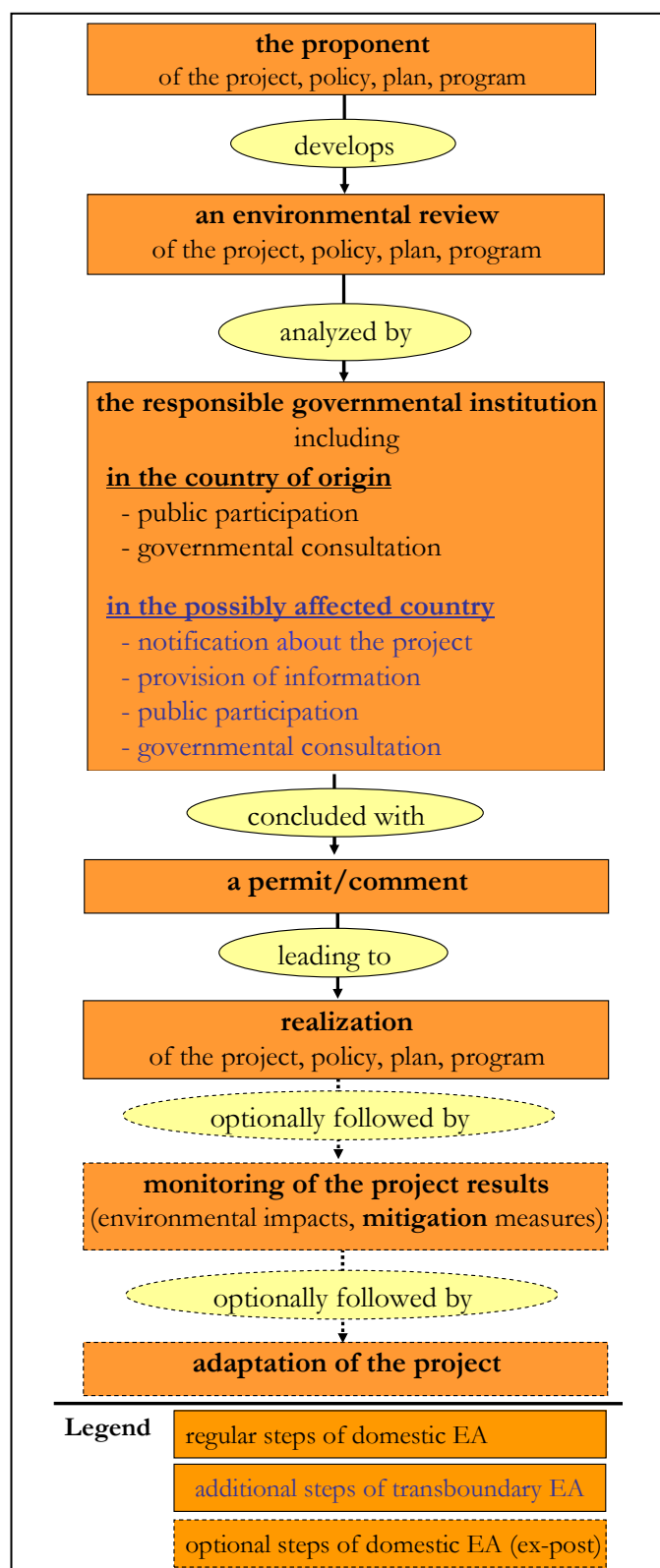
Based on this environmental analysis, the environmental impact statement develops mitigation measures in order to reduce environmental impacts, for instance, through changes in the construction or the operation of the project, policy, plan or program. In sum, these measures act in accordance with the precautionary principle.

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<sup>28</sup> The SEA can be regarded as a first step in the environmental assessment process, which is then followed by the project EIA. This order is represented in the concept of NAFTA's GREEN IMPACT (see Chapter 8). However, Chapter 4 describes the relevant elements of environmental assessment on the basis of the project EIA which is the common basis in all NAFTA countries, whereas this chapter starts with the project EIA.

Figure 5: Central components of environmental assessment relevant for domestic and transboundary project EIA and SEA

(summarized as “EA” for environmental assessment)





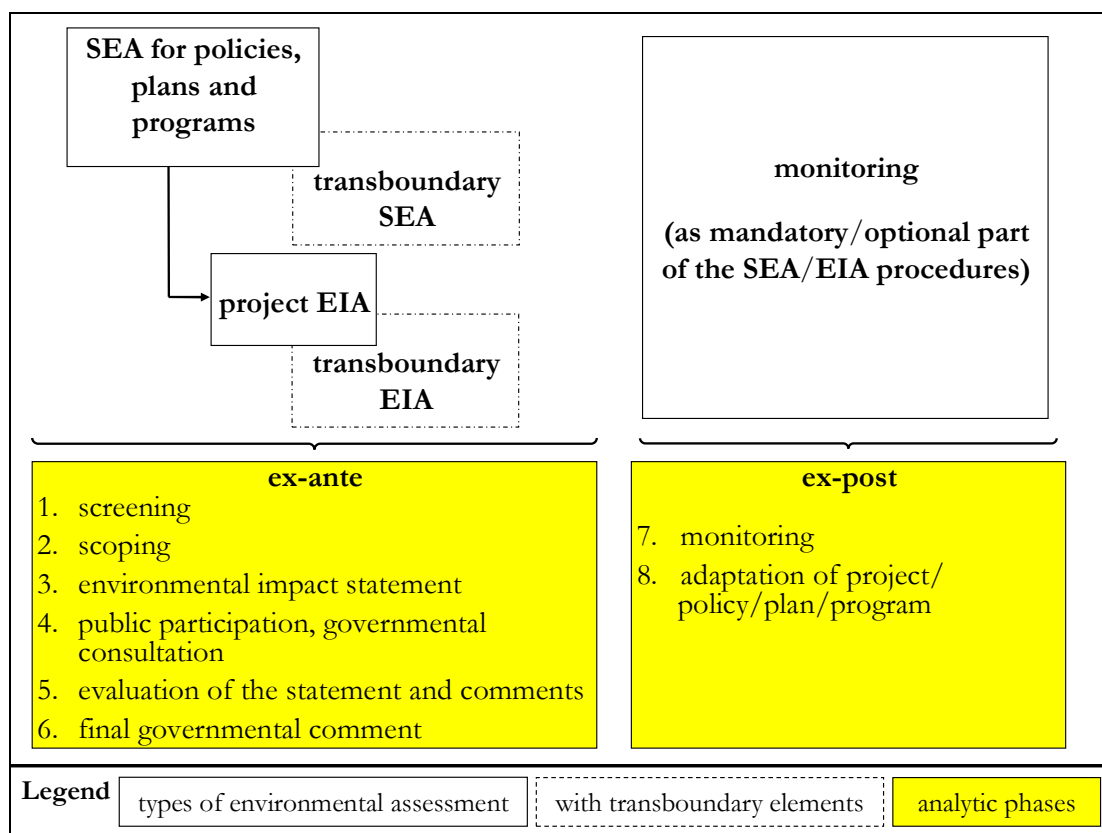
This evaluation through EIA and SEA originally focused on domestic territory. In the past approximately fifteen years, international cooperation through environmental assessment increased, creating the transboundary project EIA and the transboundary SEA (see Chapters 4.2, 4.3.4), which may also include an analysis of impacts and participatory steps in other countries that are possibly affected.

In sum, project EIA, transboundary EIA, and SEA for policies, plans and programs can be regarded as ex-ante instruments with partial ex-post components. The following Figure 5 illustrates these steps on the domestic level (black) and extends through the transboundary elements (blue), whereas the key elements of transboundary EIA are only presented in the phase of environmental impact statement and are not marked for monitoring (though they may be part of it; see Chapter 4.2).

Figure 6 illustrates the interaction of project EIA and SEA for policies, plans and programs, as these types of environmental assessment and the interaction of these ex-ante and ex-post steps are vital to this dissertation. This interaction will also be integrated into the concept of NAFTA'S GREEN IMPACT (see Chapter 8).

Figure 6: The reference scheme of interaction of environmental assessment

(author's compilation, according to Glasson et al. 2005, Dalal-Clayton, Sadler 2005, Morris, Therivel 2009, Wood 2003)



In sum, “environmental impact assessment” – and in this context, the project EIA and SEA can again be said to have similar objectives – is:

“[A] systematic and integrative process [...] for considering possible impacts prior to a decision being taken on whether or not a proposal should be given approval to proceed. [...] In principle, EIA should lead to the abandonment of environmentally unacceptable actions and to the mitigation to the point of acceptability of the environmental effects of proposals that are approved” (Wood 2003: 1 f).

The political influence of the instrument on the decision-making process depends directly on the commitment to environmental assessment of the responsible authority; however, EIA does not explicitly aim at preventing actions with potentially negative impacts from being implemented (id.: 2 f).

The different types of domestic environmental assessment in the NAFTA countries are presented in Table 6 and described in detail in the following sub-chapters. The current chapter provides an overview of these approaches on the national level in order to support the analysis of environmental assessment as part of the NAAEC (Chapter 7) and the concept of NAFTA’S GREEN IMPACT (Chapter 8). The description focuses on the federal level and is partly extended by selected examples from the subnational level.

This chapter promotes a general understanding of the instrument and of the particular differences that arise from the individual domestic integration and governmental structure of Canada, the US and Mexico, without going into further detail concerning domestic strengths and challenges or methodological differences between the NAFTA countries.

Table 6: Comparison of the legal background of the different types of environmental assessment in Canada, the US and Mexico on the federal level  
(author’s compilation, according to references in Chapter 4)

<b>Type of Environmental Assessment</b>	<b>Environmental Assessment Canada</b>	<b>Environmental Assessment US</b>	<b>Environmental Assessment Mexico</b>
project EIA (see Chapters 4.1, 7.2)	Canadian Environmental Assessment Act 1992  Inclusion List Regulation  Law List Regulation  Exclusion List Regulation  Comprehensive Study List Regulation	National Environmental Protection Act 1969 (NEPA)  Council on Environmental Quality Regulations on Implementing NEPA  Exclusion List	General Law on Ecological Equilibrium and Environmental Protection 1988  Regulation under the General Law on Ecological Equilibrium and Environmental Protection regarding Environmental Impact Assessment

			Sectoral Guidelines
Type of Environmental Assessment	Environmental Assessment Canada	Environmental Assessment US	Environmental Assessment Mexico
Studies relevant for project EIA	mediation review panel screening/ class screening comprehensive study	environmental assessment <sup>29</sup> environmental impact statement	preventative report regional environmental impact statement particular environmental impact statement
transboundary EIA (see Chapters 4.2, 7.2)	Canadian Environmental Assessment Act 1992 Ratification Espoo Convention NAAEC 1993 as background for transboundary EIA	Council on Environmental Quality Guidance on NEPA Analyses for Transboundary Impacts (1997) Signature Espoo Convention NAAEC 1993 as background for transboundary EIA Agreement	NAAEC 1993 as background for transboundary EIA Agreement
Studies relevant for transboundary EIA	mediation review panel	Recommended to be included in environmental assessment and environmental impact statement; further types of studies mentioned	not further specified in the General Law
SEA for policies, plans and programs (see Chapters 4.3, 7.1)	Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals 1999  individual departmental guidelines	National Environmental Protection Act 1969	General Law on Ecological Equilibrium and Environmental Protection 1988

<sup>29</sup> In accordance with the two supervisors and a staff member of one of the North American national environmental ministries, the term “environmental assessment” is used in the dissertation to equally comprise all approaches to the instrument – project level, strategic level and trade level – despite the US study type called “environmental assessment”.

Type of Environmental Assessment	Environmental Assessment Canada	Environmental Assessment US	Environmental Assessment Mexico
Studies relevant for SEA for policies, plans and program	not further specified in the Cabinet Directive individual departmental types of studies possible	not further specified in the NEPA studies of programmatic environmental impact statement conducted in practical application	SEA of plans: regional environmental impact statement
Specific SEA: trade SEA (ex-ante) (see Chapter 4.3)	Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals 1999  Framework for Conducting Environmental Assessments of Trade Negotiations (2001)	Executive Order 13141  Guidelines for Implementation of Executive Order 13141	---
Studies for trade SEA	initial environmental assessment (EA)  draft EA  final EA report	initial environmental review  interim environmental review  final review	---
Specific SEA: NAFTA EA (ex-post) (see Chapter 7.3)	NAAEC 1993		
Studies for NAFTA EA	Ex-post studies of the NAFTA EA		

## 4.1 Environmental Impact Assessment of Projects (Project EIA)

During the execution of a project EIA, the focus is usually on specific projects expected to have extensive environmental negative impacts, for example roads, industrial sites and power plants. The following analysis of the domestic procedure for Canada, the US and Mexico is divided into seven parts, which provide insight into key elements of the institutional background and procedural steps: the federal legal context, the responsible federal authority, the environmental impact statement, public participation and governmental consultation, final governmental results, monitoring, and the role of the subnational level.<sup>30</sup> The analysis thus describes the legal framework in order to illustrate the opportunities rather than the challenges of implementation. These parts were selected and adapted based upon the commonly accepted key elements of project EIA that can be found in many EIA procedures (as illustrated, among other authors, by the research of Wood (2003) and Morris, Therivel (2009) on environmental impact assessment).

### 4.1.1 Project EIA in Canada

#### Federal legal context

In 1995, the federal Canadian Environmental Assessment Act entered into force as a separate law for environmental impact assessment (Canadian Environmental Assessment Act 1992). The Act refers to projects, not to policies, plans and programs (Wood 2003: 70 f), thereby focusing on projects requiring federal permits, and not on private activities (Tweedie 2006: 875, 878).

Central regulations help identify the need for an environmental assessment procedure (CEAA 2008: Canadian Environmental Assessment Act and Regulations):

- Inclusion List Regulations (SOR/94-637): projects may require environmental assessment, for example projects from the oil, gas, transportation and fisheries sector,
- Law List Regulation (SOR/94-636): “federal statutory and regulatory approvals” (CEAA 2008: Canadian Environmental Assessment Act and Regulations) that might require environmental assessment, for example, the Arctic Waters Pollution Prevention Act, the Canada Transportation Act (selected sections/subsections) and the National Energy Board Act (selected sections/subsections/paragraphs),
- Exclusion List Regulations (SOR/2007-108): projects are excluded from

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<sup>30</sup> There exist certain activities towards environmental assessment on the local level as well. However, as this level plays an inferior role in the dissertation, this analysis focuses on the subnational level and does not include the local level.

environmental assessment due to insignificant environmental impact, for example, projects realized within certain areas (e.g., electrical energy projects constructed along certain linear constructions such as railway lines),

- Comprehensive Study List Regulations (SOR/94-638): projects require a Comprehensive Study, for example, electricity generators and transmission lines (such as the construction and expansion of fossil fuel-fired stations) and industrial facilities (such as the manufacturers of chemical products of a certain size).

In addition, specific guidelines on environmental assessment exist, for example, on biodiversity and panel review procedures (Wood 2003: 101) and individual departmental guidelines (id.: 71)/ specific authorities as well as coordination lists (CEAA 2008: Canadian Environmental Assessment Act and Regulations).

### **Responsible federal authority**

The federal department responsible for initiating or financing the project is the lead agency for the respective federal EIA (Canadian Environmental Assessment Act 1992: Art. 11, Wood 2003: 101, 114), and follows its individual guidelines (id.: 71). Environment Canada, as the environmental federal ministry, is responsible for conducting EIAs that fall within its jurisdiction. It may also comment on the EIA studies of other lead agencies as part of the consultation process (Expert H).

The Canadian Environmental Assessment Agency was created as a task-specific institution that “provides leadership and serves as a centre of expertise for federal environmental assessment” (CEAA 2005: Frequently Asked Questions). As an autonomous agency that administers the Canadian Environmental Assessment Act (Expert H), it conducts reports and policy analyses on the Act (Wood 2003: 71 ff).

### **Environmental impact statement**

Mediations, Review Panels, Screenings/ Class Screenings<sup>31</sup> and Comprehensive Studies make up the Canadian environmental impact statement, although the majority of the proposed projects are assessed through the latter two mechanisms (CEAA 2005: Frequently Asked Questions). Projects included in the Comprehensive Study List Regulation, such as large-scale oil and natural gas developments, require a Comprehensive Study (CEAA 2007: Basics of Environmental Assessment), including a mandatory scoping and two individual screening procedures (Wood 2003: 167, 149 f).

### **Public participation and governmental consultation**

The nature of public participation is outlined in the Canadian Environmental Assessment Act and is mandatory for every type of environmental impact statement (in

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<sup>31</sup> Screening and Comprehensive Studies both amount to 99 % of the federal EAs (id. 2005: Frequently Asked Questions). As mediations and review panels are only randomly applied, they will not be further discussed here.

Projects, however, may require more than one type of study for their analysis (id.).

Screenings it is discretionary). Individual requirements for each type of study apply, wherein the public may participate in different stages of the process, for example, through a participation in the Comprehensive Studies but also through general hearings. In addition to the public, external experts may be consulted (Wood 2003: 288 ff).

### **Final governmental results**

The final results of the environmental analysis may officially lead to an abandonment of the project (Wood 2003: 232). As many of the projects are evaluated through Screenings, projects usually do not stop based on the results of the study (Tweedie 2006: 879). However, the departments can deny their permission in the event that “the project is likely to cause significant adverse environmental effects that cannot be justified in the circumstances” (id.: 879, quoting the Canadian Environmental Assessment Act 1992, Art. 37(1)(b)).

### **Monitoring**

The departments may also call for a follow-up on the project; thus, monitoring can be regarded as partially integrated into the EIA system (Wood 2003: 358).

### **The subnational level**

In Canada, both the federal and the subnational level “have the authority to legislate environmental impact assessment” (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Canada: 7). Each of the ten provinces has individual legislations for environmental assessment (Wood 2003: 73), for instance, the Environmental Assessment Act for Ontario (1990). Certain projects require authorization from the federal as well as from the respective subnational government (Wood 2003: 73).

The procedures of EIA vary on the federal and subnational level (Expert E) as well as among the different provinces. Some aspects of the individual subnational regulations may be stronger than the federal ones (Wood 2003: 73). Several bilateral Sub-Agreements on Environmental Assessment, for example, between the Federation and Manitoba and Alberta, aim to harmonize the federal and subnational governmental requirements for projects following “a single environmental assessment meeting the legal requirements of both governments” (quote: CEC 2003: Publications and Information Resources - Summary of Environmental Law in Canada: 7, content id.: 2, Wood 2003: 73).

## **4.1.2 Project EIA in the US**

### **Federal legal context**

The federal EIA in the US is part of the National Environmental Policy Act (NEPA) in its section 102 (NEPA 1969, Wood 2003: 94). The Regulations on Implementing NEPA (parts 1500-1508) established by the Council on Environmental Quality (CEQ) in 1978 give “definitive guidance to federal agencies on the implementation of NEPA’s environmental impact assessment provisions” (quote CEC 1998: 39, CEQ 1978).

NEPA as a federal law addresses federal projects in terms of permissions, financing, etc. (Tweedie 2006: 864) as well as policies, plans, programs ((Wood 2003: 111, see Chapter 4.3.2). The responsible authority needs to comply with the CEQ guidelines (Tweedie 2006: 864 f). A departmental exclusion list (categorical exclusion), which defines the types of projects that do not require an EIA, may exclude these projects from an EIS (id.: 865, CEQ 1978: 1500.4p).

Examples for a project EIA are, among others, highway and public transportation projects (Federal Highway Administration/ Federal Transit Administration Title 23: Highways, Part 771—Environmental Impact and related procedures § 771.101). The Department of Energy, among others, established an exclusion list for projects that do not require an environmental impact statement according to NEPA which includes emergency preparedness planning (A12) and umbrella agreements for cooperation in energy research and development (A15). The reconstructing and constructing electric powerlines (C4) and the field demonstration projects for wetlands (C9), among others, usually require an Environmental Assessment as a study but not necessarily an Environmental Impact Statement (U.S. Department of Energy, no date: PART 1021 – National Environmental Policy Act Implementing Procedures).

### **Responsible federal authority**

As in Canada, the lead US agency responsible for the project in terms of construction, funding, permitting, etc., is also accountable for the project EIA. The majority of the departments and agencies have adapted their regulations to meet the requirements established by the NEPA and the CEQ. The US EPA has the right to comment on any EIA. Additionally, the CEQ serves as a guidance institution to politically coordinate the implementation of NEPA requirements (Wood 2003: 20 ff, 95, 111).

### **Environmental impact statement**

If the lead agency finds in its preliminary Environmental Assessment<sup>32</sup> that the activity does not require an environmental assessment, it publishes a Finding of no significant Impact (FONSI). These steps are similar to a first rough screening including scoping elements. If this screening concludes the need for an EIA, the agency then publishes a Notice of Intent (NOI) describing the scope of the actual assessment. A draft environmental impact statement then analyzes the environmental impacts, also including a public review and consultation of all governmental levels that may be affected by the project, including subnational levels and the US EPA. Based on this information and a final environmental impact statement, the lead agency states in the Record of Decision (ROD) the reasons for the decision that was taken regarding the project (Woods 2006: 20 ff, 225 f, Tweedie 2006: 865 ff).

### **Public participation and governmental consultation**

NEPA and the CEQ regulations require the integration of civil society as well as

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<sup>32</sup> See footnote 29.



relevant departments during an EIA process. Both types of participation take place during various stages of the process, e.g. for the draft EIS and final EIS. The information from the studies is published for public comment, for instance on the Internet and in meetings (Wood 2003: 281 f, Tweedie 2006: 868 f). The governmental consultation with “the relevant federal, state, tribal and local agencies” usually takes place during the draft environmental impact statement, but also during other stages of the process (Wood 2003: 281 f, quote id.: 283).

### **Final governmental results**

In an EIA, NEPA requires an analysis and a “disclosure of the environmental effects of a project” (Tweedie 2006: 862). The lead agencies may refuse its consent to a project based on the results of the assessment, but it is not required to select the most environmentally friendly alternative (id., Wood 2003: 25, 225 f).

### **Monitoring**

As a last step – and in addition to the Record of Decision – monitoring is regarded as an optional part of the EIA procedure (Wood 2003: 23 ff). However, “[t]here are somewhat inadequate provisions for monitoring the environmental impacts arising from an action and for ensuring that the various conditions or mitigation measures that have been included in the final EIS are implemented” (id.: 25). Thus monitoring cannot be regarded as a fixed part of the EIA procedure (id.: 358); but when the lead agency includes it in its decision, it is then required to apply it (Tweedie 2006: 870).

### **The subnational level**

On the subnational level, the “[s]tates may also supplement NEPA through state law” (CEC 2003: Publications and Information Resources - Summary of Environmental Law in the United States: 7). Several, but not all, US states have implemented equivalents to NEPA as components of environmental policy on the state level (Wood 2003: 27 ff, 111). In Minnesota, the Minnesota Environmental Policy Act, enforced through the Minnesota Environmental Quality Board, requires state agencies and local authorities to conduct environmental impact statements (id.: 30). Through its California Environmental Quality Act and the State Clearinghouse Office of Planning and Research, California obligates projects that involve the state or local government through funding, permits etc., to execute an environmental impact assessment, thereby also covering many private projects as well as projects that entail governmental involvement (id.: 29, CEC 1998: 52 f). Some projects and activities may require both an EIA according to NEPA and another one according to the respective state legislation (Tweedie 2006: 880).

In contrast, Texas generally “has no comprehensive law or regulation requiring environmental impact assessment” (CEC 1998: 54; confirmed informally 2006). However, sections in specific codes, departments and boards such as the Texas Water Code and the Department of Transportation can require statements for environmental assessment (CEC 1998: 54).

### 4.1.3 Project EIA in Mexico

#### Federal legal context

Mexico's federal environmental law, the General Law on Ecological Equilibrium and Environmental Protection (LGEEPA 1988, central reform 1996, additional minor reforms until 2008), includes the EIA in its Articles 28-35 BIS. The Regulation under the General Law on Ecological Equilibrium and Environmental Protection regarding Environmental Impact Assessment (2000, hereinafter Regulation regarding EIA) particularizes the EIA procedure in an additional 65 articles.

Both the Law (1988, reformed: Art. 28) and the Regulation (2000: esp. Art. 5) include a detailed list of projects that always demand an EIA on federal level. These projects mainly:

- exceed a certain size (inter alia dams with more than 1 billion volumetric capacity),
- usually entail severe environmental impact (for instance atomic power plants),
- are to be realized in an area that is of special interest to the federation (for example forestry, water regions and federal national parks),
- affect at least two states (id., Podhora 2003: 35 f).

In sum, there exist project lists for the types of projects that require federal EIA (Tweedie 2006: 887), for example projects related to the oil and cement industry. There also exist guidelines for the central sectors (Podhora 2003: 17).

#### Responsible federal authority

The General Law addresses public and private projects and activities whose EIA lies in the interest of the federation. Thus the term “federal project” does not refer to permits or funding of the project, but rather to projects that are part of the list under the General Law and its Regulation, and where the EIA is carried out by Mexico's environmental ministry SEMARNAT (Tweedie 2006: 886 f, Podhora 2003: 28 ff). The National Institute of Ecology “implements the EIA process” (Tweedie 2006: 886), whereas the Federal Attorney General for Environmental Protection monitors the implementation according to the requirements set out in the environmental impact assessment (Podhora 2003: 35).

#### Environmental impact statement

On the federal level, three different types of environmental impact statements (EIS) exist: the preventative report, similar to an extended project screening,<sup>33</sup> the regional environmental impact statement<sup>34</sup> and the particular environmental impact statement.<sup>35</sup> The form of the statement depends on the characteristics of the project, for example:

- the types of permission required for extension/alteration of projects that already

<sup>33</sup> Informe Preventivo.

<sup>34</sup> Manifestación del Impacto Ambiental Regional.

<sup>35</sup> Manifestación del Impacto Ambiental Particular.

exist (preventative report similar to a project screening),

- the region where the project is planned (inter alia projects that have impacts on water economy always require a regional statement),
- the size/shape of the project (for example, linear projects like train routes always require a regional statement; any project that is not mentioned in the list for regional statements requires a particular statement) (Podhora 2003: 39 ff).

### **Public participation and consultation**

The opportunities for citizen participation include a publication of the environmental impact statement and a discretionary public meeting. These activities occur mainly after the elaboration of the study (Tweedie 2006: 890). Governmental consultation takes place as a regular part of the federal EIA procedure (Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental 2000: Art. 24 f).

### **Final governmental results**

The procedure concludes with a full permit by SEMARNAT, with a permit under the condition that additional requirements are met and adaptations to the project are made, or with a rejection of the project (Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental 2000: Art. 45, Podhora 2003: 45 ff).

### **Monitoring**

The monitoring of the project can be integrated into the study. The process may take place either through reports developed by the project's proponent, through inspections by the SEMARNAT or the Federal Attorney General for Environmental Protection, or through citizen complaints to the Federal Attorney (Tweedie 2006: 892).

### **The subnational level**

Unlike in Canada and the US, Mexican legislation on EIA is exclusive; for this reason, projects are subject either to the federal or to the respective state requirements, not to both (Podhora 2003: 34, Tweedie 2006: 889 f). All Mexican states have enacted state laws on environmental impact assessment (CEC 1998: 35). Since the states have a high level of autonomy, the federation cannot re-assign the conduction of an EIA of a particular project to the states (Podhora 2003: 34). The states may decide on the scope of their environmental assessment procedure according to their individual environmental legal requirements, guidelines and responsible authorities. The states may ask for an EIA for any project or activity not mentioned in the project list of the General Law (CEC 2003: Publications and Information Resources - Summary of Environmental Law in Mexico: 2). Projects that can lie in the interest of the states may show some of the following characteristics:

- have a smaller size than those projects that are conducted by the federation (for example, dams with less than 1 billion volumetric capacity),
- have fewer environmental impacts (inter alia, regionally limited impacts like

hospitals, schools, industrial zones and parks),

- are planned in an area that is of special interest to the state (for instance state national parks),
- affect two or more communities (Podhora 2003: 68 ff by example of the state Veracruz-Llave).

The Law on Environmental Equilibrium and Environmental Protection of Chihuahua, for example, requires environmental impact assessment on the state level (thereby abiding by certain regulations: Ley de Equilibrio Ecológico y al Protección al Ambiente del Estado de Chihuahua 2005: Art. 41-50). Additionally, since the late 1990s, the federation has decentralized some of its duties and has passed these on to the states (Podhora 2003: 37).

## 4.2 Transboundary Environmental Impact Assessment of Projects (Transboundary EIA)

The environmental impacts of projects are not necessarily limited to the country where the project is implemented. Due to common environmental factors, the effects of a project in one country may have direct or indirect impact on a neighboring country, the so-called (possibly) affected party or country (Schrage, Bonvoisin 2008: 235, Convention on Environmental Impact Assessment in a Transboundary Context 1991: Art. 1(iii), Bastmeijer, Koivurova 2008: 10, 15). The UNECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) defines transboundary impacts as “any impact, not exclusively of a global nature, within an area under the jurisdiction of a Party caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another Party” (Espoo Convention 1991).

Transboundary environmental impact assessment (transboundary EIA) aims at integrating these effects on other countries into the domestic EIA procedure of the country of origin. It thus incorporates impacts on the possibly affected party into the environmental analysis and creates extended consultation and participation opportunities during the EIA process (Bastmeijer, Koivurova 2008: 1, 7 ff, Schrage, Bonvoisin 2008: 235).

A well-known example of an international framework for transboundary EIA is the Espoo Convention that was created in 1991 and entered into force in 1997. International agreements may also lay the groundwork for further negotiation and specification among the federal, state or regional levels of each country, including negotiations concerning practical implementation.<sup>36</sup>

Five components are often found in the process of transboundary EIA (see Figure 5):

1. notification of the possibly affected country about the project and its likely

<sup>36</sup> For example for Germany-Poland (Albrecht 2008, Lambrecht 2002).

transboundary impacts,

2. provision of information about the project and its likely transboundary impacts, if desired,
3. consideration of the comments provided by the possibly affected country through consultation and participation in the domestic EIA procedure in the country of origin,
4. notification about the results of the evaluation,
5. extension of mitigation measures concerning the project's impacts to include the territory of the neighboring country.

Besides ratifying agreements on international cooperation regarding transboundary EIA, the countries also integrate transboundary effects into their national legislation. The differences among the national EIA systems, however, are great and thus may impede international cooperation regarding transboundary EIA (see Chapters 4.1, 7.2). Challenges can be found, among others, in the identifying of 'politically adequate' projects in all countries involved in the transboundary EIA, in identifying the respective responsible authority of the other countries and to agree on the costs (e.g. public hearings, translation) (Schrage, Bonvoisin 2008: 235 f, Expert ).

This chapter examines the present role transboundary EIA plays in domestic approaches in order to set the foundation for an analysis of the role of transboundary EIA in the NAAEC (see Chapter 7.2) and focuses less on the existing individual domestic steps concerning this type of the instrument and their relation to the regular project EIA.

#### 4.2.1 Transboundary EIA in Canada

The Canadian Environment Assessment Act has a separate section on transboundary EIA, called "Transboundary and Related Environmental Effects" (Canadian Environmental Assessment Act 1992, Art. 46-53). In this section, borders are regarded as "boundaries between non-federal and federal lands, or across provincial or international boundaries" (Canadian Environmental Assessment Agency 2005: Frequently Asked Questions). Any assessment carried out under this Act also needs to analyze possible transboundary environmental impacts (CEC 1998: 13), whereas "[s]ubsequently [...] regulations relating, *inter alia*, to projects outside Canada have been issued" (Wood 2003: 100). These initiatives are related to the federal level. The impacts are mainly conducted via mediation and review panels (Canadian Environmental Assessment Act 1992: Art. 46(1)).

Canada does not federalize projects with transboundary impacts, but they stay – if applicable – under the responsibility of the respective state (Expert E, Expert L).

As early as 1991, Canada signed the UNECE Espoo Convention and went on to ratify it in 1998 (Garver, Podhora 2008: 254). Furthermore, Canada initiated the integration of transboundary EIA into the NAAEC (Expert R) (see Chapter 7.2.3).

## 4.2.2 Transboundary EIA in the US

NEPA is complemented by the Council on Environmental Quality Guidance on NEPA Analyses for Transboundary Impacts (1997), which are applicable on the federal level. They state that “NEPA requires agencies to include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States”. Thus the Guidance refers to any action that would be subject to an environmental assessment under NEPA and which are proposed “within the United States and its territories.” Similar to Canada, the US does not federalize projects with transboundary impacts that are under the responsibility of a state (Expert E, Expert L).

Even prior to this Guidance, the transboundary component of NEPA was backed up by Executive Order 12114, Environmental Effects Abroad of Major Federal Actions (1979)<sup>37</sup>. The Order provides examples for relevant projects, e.g. those impacting “global commons outside the jurisdiction of any nation” (Section 2-3(a)).

The Guidance recommends to include the transboundary analysis in the environmental assessment and environmental impact statement. The Executive Order (Section 2-4(a)) is more specific as it calls for

- “(i) environmental impact statements (including generic, program and specific statements),
- (ii) bilateral or multilateral environmental studies [...],
- (iii) concise reviews of the environmental issues involved, including environmental assessments, summary environmental analyses or other appropriate documents”.

In addition to these national commitments, the US signed the UNECE Espoo Convention, but did not ratify its signature (Garver, Podhora 2008: 254).<sup>38</sup>

## 4.2.3 Transboundary EIA in Mexico

In Mexico, any project that has transboundary impacts is considered to be of federal importance and is therefore evaluated by the federal SEMARNAT according to federal standards (LGEEPA 1988: Art. 5.III, IV, in general without any explicit reference to EIA). The LGEEPA, furthermore, indirectly incorporates transboundary EIA by dictating that any activity conducted on Mexican territory should not harm the environment of other countries (Art. 15.XVII). These two aspects, however, are not part of the section on environmental impact assessment. Tweedie (2006: 892) states that “nothing in the Ecology Law [the General Law] limits the scope of the EIA process to domestic environmental harm”; thus the Law legally gives way to transboundary EIA in a domestic context.

<sup>37</sup> The individual scope, the similarities, differences and possible contradictions as well as the interaction mechanisms of the Guidance and the Executive Order are not further explored in this dissertation.

<sup>38</sup> Explicit activities on the US subnational level concerning transboundary EIA were not identified during the research.

#### 4.2.4 Transboundary EIA in North America

At present, neither a formal binational nor a trilateral consultative process among the NAFTA countries exists for proposed projects likely to have significant transboundary environmental impact. When problems occur, the countries resort to diplomatic efforts (Expert A, Expert R). Examples of projects of transboundary concern that were mentioned and identified during the research are the All American Canal (Expert I), the power plant La Rosita in Mexico.

Trilateral approaches to transboundary EIA have been developed under the directive of the NAAEC and recently under the Security and Prosperity Partnership (see Chapter 7.2). In order to apply the Espoo Convention, the country of origin as well as all possibly affected parties need to be full members of the Convention (Tweedie 2006: 898), a prerequisite that is not fulfilled by the North American countries. As far as this dissertation research could determine, no instances exist in which the Convention was used as a framework for transboundary EIA on the continent.

### 4.3 Strategic Environmental Assessment for Policies, Plans and Programs (SEA)

The UNEP EIA Training Resource Manual (UNEP 2002: 493) defines strategic environmental assessment as “[a] formal process of systematic analysis of the environmental effects of development policies, plans, programmes and other proposed strategic actions. This process extends the aims and principles of EIA [...] beyond the project level and when major alternatives are still open.”

According to this quotation from Therivel (2004: 9), an SEA may be applied during the following activities (underlined those especially relevant for the dissertation):

- “legislation: national, regional, local; international treaties;
- Green and White Papers;
- economic policies, budgets, fiscal planning, eg structural adjustments, privatization, subsidies, taxation, trade agreements;
- integrated/development plans: national, regional/territorial, local/town; multi-project programmes; conservation areas (World heritage, national parks);
- sectoral policies, plans and programmes at a wide range of scales, eg for agriculture, transport, waste;
- policies, plans and programmes for management of a specific resource at a wide range of scales, eg coastal management, forest management, water management; and
- policies, plans and programmes to achieve social ends, eg employment development, equitable access to transport, international aid.”

The system of SEA is internationally not as well implemented as the project EIA (Jones et al. 2005: 15). Today, SEA is part of the domestic legislatures in many countries, guided mainly by two approaches that are also obvious in the list established by Therivel (2004: 9): The analysis has either a primary focus on the policy level or on the regional/territorial level. As with the project EIA, the countries set individual foci in the

development of the instrument, as the approaches in North America illustrate in the following sub-chapters.

Initial approaches to an SEA in a transboundary context also exist. In 2003, the UNECE initiated the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (also called Kiev SEA Protocol) (2003). The Protocol entered into force in July 2010 (United States Treaty Collection 2010: Chapter XXVII Environment).

The Kiev SEA Protocol mainly refers to plans and programs and their modifications, not to policies (Protocol on Strategic Environmental Assessment 2003: Art. 2.5; also “to the extent appropriate, policies and legislation”, id.: no Article). It specifies the sectors to which it applies, for example, forestry, transport, country planning and land use (id.: Art. 4.2) and includes regulations for the key aspects of a SEA.<sup>39</sup>

A special aspect of SEA that is relevant for this dissertation is the assessment of trade agreements (trade assessment): “Since the mid-1990s strategic-level impact assessment has increasingly been applied to trade-related policies and agreements, to provide information to trade negotiators and decision-makers” (George, Goldsmith 2006: 254). At present, only a few international approaches measure environmental impacts of trade liberalization based on extensive scientific data. Central to this progress are the ex-ante assessments of the ex-ante sustainability impact assessment in the EU, as well as of environmental assessment in Canada and the US (Podhora 2007a: 8 f). NAFTA was also the first free trade agreement to address the EA of a trade agreement (George, Goldsmith 2006: 254); however, the NAFTA EA is conducted on an ongoing ex-post basis (see Chapter 7.3).

As the SEA instrument and its implementation are innovative and thus partly less developed than the project EIA, and due to its distinctive characteristics in comparison with project EIA, the following sub-chapters supply general information instead of the detailed descriptions provided for the project EIA.

### 4.3.1 SEA in Canada in General

In 1999, the Canadian federation adopted the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals<sup>40</sup> (Government of Canada 2004, Gehring 2007: 91, CEAA 2004: 2), in which Canada goes beyond the project focus articulated in the Canadian Environmental Assessment Act (Wood 2003: 115). The Cabinet Directive should be employed when:

“1. the proposal is submitted to an individual minister or Cabinet for approval [and]

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<sup>39</sup> Key items: Screening, scoping, environmental report, public participation, consultation with environmental and health authorities (a rather new approach compared to the general setting for EIA in chapter 4), transboundary consultations, decision and monitoring (Kiev SEA Protocol 2003: Art. 6-12).

<sup>40</sup> Revised 2004.



2. [the] implementation of the proposal may result in important environmental effects, either positive or negative.” (Government of Canada 2004: 4)

Based on the directive, Canadian federal departments and agencies assess the “likely and significant environmental impacts of an initiative” (Foreign Affairs and International Trade 2001: ii) that belongs to their area of responsibility and adheres to specific guidelines (Gehring 2007: 91). Thus the SEA focuses on policies and usually not on spatial plans (Expert H). The individual ministers are responsible for the environmental impacts of their initiatives; therefore, each respective agency acts as the lead agency for a SEA (Government of Canada 2004: item 2.6.2). The key elements of a SEA may thus differ among the ministries (e.g. specific steps for the assessment of trade as listed in Foreign Affairs and International Trade 2001: 8, see also Chapter 4.3.1.1).

The SEA procedure follows similar steps as the one for the project EIA: it addresses the “scope and nature of potential effects”, “the need for mitigation or opportunities for enhancement”, “the scope and nature of residual effects”, and “follow-up” measures as well as “public and stakeholder concerns” (Government of Canada 2004: 6). The procedure also includes aspects such as screening/environmental analysis, public involvement, and documentation/reporting, as well as roles and responsibilities. The steps of a SEA are loosely and rather superficially outlined in the Cabinet Directive (Government of Canada 2004). In the case of the Department of Foreign Affairs and International Trade (see also Chapter 4.3.1.1), the five steps of the assessment procedure – Announcement, Initial EA, Draft EA, Use of Draft EA and Final EA Report – are related to the timeline of the negotiations for the trade agreement (Foreign Affairs and International Trade 2001: 8). Generally speaking, the results of the studies are internally but not legally binding (Gehring 2007: 91).

#### 4.3.1.1 SEA of Trade Agreements

Based on the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals and its stipulations about when to conduct a SEA, Canada evaluates trade negotiations with the Department of Foreign Affairs and International Trade acting as the lead agency (Foreign Affairs and International Trade 2001: ii, Gehring 2007: 91, 94). For this purpose, Canada established the “Framework for Conducting Environmental Assessments of Trade Negotiations” (2001). Examples of recent Trade SEAs include the free trade agreements with Colombia and Peru (Foreign Affairs and International Trade Canada 2009: Final Environment Assessment of the Canada-Colombia and Canada-Peru Free Trade Agreement (FTA) Negotiations), which basically follow the steps described in Chapter 4.3.1.

Canada has neither directives nor guidelines that address ongoing assessments of the environmental impacts of trade agreements (Expert C).

#### 4.3.1.2 Trade SEA of NAFTA

Canada initiated its national implementation of trade-related ex-ante assessments by

publishing comments on NAFTA's possible environmental effects (Beale 2000: 45). This assessment, however, was conducted prior to the adoption of the Cabinet Directive, and was not based on an extensive methodological analysis (Expert C) comparable to the framework that exists today for the analysis.<sup>41</sup> In addition, the monitoring procedure related to the NAFTA agreement is weak (Wood 2003: 27).

### 4.3.2 SEA in the US in General

NEPA also kicked off the SEA for policies, plans and programs in the United States (Therival 1993: 146), uniting the SEA and the EIA in one Act: as Wood (2003: 339) states, "SEA procedures are not distinguished from project EIA procedures in the United States." An explanation of the content of the Act, and thus the general procedure of an SEA, would therefore be redundant. In the practical implementation, the US generally use the term programmatic/ program environmental impact statement (PEIS) (Therival 1993: 147)<sup>42</sup>, but also "regional, cumulative or generic EISs (or sometimes simply EISs)" (Jones et al. 2005: 15), not primarily strategic environmental assessment<sup>43</sup>.

The Department of Energy, among others, refers in its departmental specifications of NEPA to a "project, program, plan, or policy" (U.S. Department of Energy PART 1021 – National Environmental Policy Act Implementing Procedures, §1021.104(b)).

#### 4.3.2.1 SEA of Trade Agreements

The instrument of environmental assessment in the US is also applied to major trade agreements, though it is not mandatory for all trade agreements (Gehring 2007: 115 ff, 119). These assessments are delineated in the Executive Order 13141 Environmental Review of Trade Agreements (November 16, 1999) and supported by the Guidelines for Implementation of Executive Order 13141 (Gehring 2007: 121). Though the trade environmental assessments (called "reviews") are not an explicit part of NEPA, the influence of the Act on the elements of the assessments is obvious: the key elements consist of an initial environmental review, a decision on the written review, the determination of the scope, an interim environmental review, and a final, published review document (id.: 118, 127).

The US Trade Representative functions as the lead agency in this process (id.: 121). Examples of recent environmental reviews of trade accords are the interim

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<sup>41</sup> An overview of the Canadian ex-ante environmental assessment of NAFTA is available on the Internet (Muarry 1993: NAFTA and the Environment (MR-116E)); however, the information provided is too brief to be useful for the topic of the dissertation.

<sup>42</sup> As examples see United States Department of Transportation/ Federal Railroad Administration (2001) "Final Programmatic Environmental Impact Statement Maglev Deployment Program" (Volume I and II) and U.S. Department of Energy (2009) "Overview of the Final Waste Management Programmatic Environmental Impact Statement".

<sup>43</sup> In order to provide consistency in the terminology, this thesis uses the term "strategic environmental impact assessment" with view to its dimensions of policies, plans and program which also includes the programmatic environmental impact statement.

environmental review of the US-Andean and the US-Australia Free Trade Agreements (Office of the United States Trade Representative, no date: Environmental Reviews in FTAs).

The US has neither directives nor guidelines that address ongoing assessments of the environmental impacts of trade agreements (Expert C).

#### 4.3.2.2 Trade SEA of NAFTA

As in Canada, the environmental review of NAFTA in the US is the first environmental analysis of a trade agreement<sup>44</sup> that was realized in a very short time (Expert I). The information provided in the review can be regarded as very general, does not employ a scientific methodology (Expert C) and suffers from a weak monitoring procedure (Expert I).

#### 4.3.3 SEA in Mexico

In Mexico's federal General Law, the approaches to SEA mainly refer to urban development plans and programs as well as environmental spatial plans rather than to policies (Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental 2000: Art. 11.II). In the case of plans, a sectoral program of development planning or regional planning may earmark for review projects that are listed in Article 28 of the General Law, and the responsible state or local governmental authority may ask the federal ministry SEMARNAT to assess the respective plan or program with regard to its environmental impacts (LGEEPA 1988: Art. 32). Consequently, the SEA functions as a discretionary element of a review process rather than a mandatory one.

These SEAs are conducted through a Regional Environmental Impact Statement (Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental 2000: Art. 11.II, IV) and thus follow the regular procedure set out by the General Law for this type of study.<sup>45</sup>

Mexico's environmental assessment procedure does not refer to trade at all: neither through an ex-ante review of NAFTA, nor within current trade agreements as in Canada and the US, nor through ex-post assessments of current trade agreements (Expert C).

#### 4.3.4 Transboundary Strategic Environmental Assessment for Plans, Programs and Policies in North America (Transboundary SEA)

The research carried out for this dissertation could detect no activity involving transboundary SEA in North America at present, neither with regard to the policy/

<sup>44</sup> The content of the NAFTA environmental review was marked confidential.

<sup>45</sup> It requires further and future research to analyze the actual development of the procedures, as the instrument is comparatively new (Podhora 2003: 43 f; informal comment 2006).

program approach nor the spatial approach.

The Canadian Cabinet Directive (Government of Canada 2004: Appendix A) refers to “environmental effect[s] [...] whether any such change occurs within or outside Canada.” In the US, NEPA comprises policies, plans and programs, whereas the Guidance on NEPA Analyses for Transboundary Impacts and Executive Order 12114 both refer to actions taken under NEPA. Thus both countries have a transboundary component.<sup>46</sup> In contrast, Mexico’s General Law covers the transboundary component and the SEA for plans rather briefly, so no direct link can be established here.

It should also be emphasized that none of the NAFTA countries signed the Kiev SEA Protocol (United Nations Treaty Collection 2009: Chapter XXVII Environment).<sup>47</sup>

## 4.4 The Environmental Assessment of NAFTA

The environmental assessment of NAFTA as a trade agreement (NAFTA EA, see Chapter 7.3) is distinct from both transboundary SEA and trade SEA in its execution. In contrast to a transboundary SEA of trade agreements, which would be conducted by the country of origin according to domestic standards for SEA, the NAFTA EA is conducted according to the criteria set out by the trinational Commission for Environmental Cooperation (see Chapter 6). Thus compared to the domestic approach to environmental assessment in North America, the NAFTA EA is special in three ways:

- it is conducted ex-post,
- it is conducted by a trinational semi-supranational institution, and
- it follows a trinational approach rather than a domestic and transboundary approach.

These distinct characteristics of NAFTA EA in comparison to existing domestic EA procedures play a relevant role in the concept of NAFTA’S GREEN IMPACT (see Chapter 8).

## 4.5 Summarizing Discussion

On the domestic level, Canada, the United States, and Mexico committed themselves to extensive procedures for project EIA, in which certain key elements – screening, environmental impact statement, public participation, governmental consultation and monitoring – are all addressed in each of the three countries. A comparison of the domestic approaches to EIA based on these elements, however, reveals a high degree of

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<sup>46</sup> The practical implementation of these transboundary components, however, was not subject of this dissertation.

<sup>47</sup> As the transboundary SEA is not an explicit part of the NAAEC and does not play a relevant role in North American approaches to environmental assessment, it is not presented in a separate chapter but is regarded as an additional optional element of the SEA for policies, plans and programs.

difference among the domestic systems. These differences need to be resolved in order to facilitate binational and trilateral cooperation regarding transboundary EIA (see Chapter 7.2) and transboundary SEA. When extending the EIA procedure to a possibly affected party, the existing domestic approaches to transboundary EIA do not appear sound enough to solve possible conflicts caused by these domestic differences.

The high degree of autonomy that the NAFTA countries grant to their states is also reflected in the instrument of environmental assessment. Particular attention needs to be paid to the governance challenges that will emerge in a transboundary context due to the additional state differences as well as the domestic differences (see also Chapter 7.2.4). These governmental differences and individual instrumental foci are also reflected in the SEA, which is at a rather embryonic stage of development in comparison to the project EIA. The nascent state of the SEA might leave more room for innovative developments than the well-established approach of project EIA.

The last noticeable feature of the comparison can be found in the rather strict approach of ex-ante assessment: All countries lack explicit and mandatory monitoring of the results of their studies. The need for a strong ex-post analysis on the project level as well as on the strategic level is obvious.

In sum, the approaches to environmental assessment can be regarded as instruments of evaluation and mitigation, which are intentionally not given the power to stop a project due to its significant environmental impacts. They are applied basically ex-ante and thus prior to the actual realization of the project or implementation of the policy, plan or program, with a comparatively weak focus on ex-post monitoring.



## 5 NAFTA and Environmental Cooperation

The process of trade liberalization aims to reduce custom duties in order to decrease prices on exports. These decreased prices of exported goods facilitates sales in the importing countries, thereby stimulating a higher demand for these products, which will eventually lead to an increase in the gross national product of the exporting countries. Furthermore, the abolishment of non-tariff trade barriers encourages companies within the liberalized region to interact. Modern trade liberalization covers merchandise products as well as services and foreign direct investment.<sup>48</sup> Besides domestic economic development, the countries have other reasons for signing trade agreements: for example, to keep pace with international competition and to proceed with the liberalization process at their own preferred speed (Altmann 2002, Pfahl 2000).

In regulating trade relationships between signatory countries, trade agreements are often at the forefront of international integration. They usually integrate neither production factors nor economic-political relations, nor a complete fusion of domestic economies, however (Dunker 2002: 41 f).

The liberalization process has become an especially important topic since the late 1980s and early 1990s (Altmann 2002: 3). In 1994, the countries moved on from the former General Agreement on Tariffs and Trade (GATT) and founded the World Trade Organisation (WTO) (WTO, no date: What is the World Trade Organization?), which counted 153 members (id. 2008: Members and Observers). Furthermore, regional trade agreements among two or more partner countries “have become a very prominent feature of the Multilateral Trading System.” In 2007, more than 380 accords were listed with the WTO (WTO, no date: Regional Trade Agreements). The trading partner countries thereby choose individual foci, procedures and schedules for liberalization in each of their agreements (see, among others, NAFTA 1992 (NAFTA 1992), US-Jordan Free Trade Agreement (Office of the United States Trade Representative, no date: Jordan Free Trade Agreement) and the Central America-Dominican Republic-United States Free Trade Agreement 2004 (id.: US-CAFTA-DR)). The process of trade liberalization is reflected in different types of trade cooperation (Altmann 2002: XIV, 12 ff), for instance, a customs union agreement (for example, European Commission Trade 2009: Turkey), trade partnerships (id. 2009: Algeria) and investment agreements (see Chapter 3.1.1).

International trade plays a central role in international economics, as global trade, for example, doubled in the 1990s (Santarius et al. 2003: 7). In 2005, world merchandise exports had a value of 10,159 billion US\$ (WTO 2006: 108). The top four trading countries in the world were Germany, the US, China and Japan (WTO 2006: 17).

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<sup>48</sup> A prominent example is the World Trade Organisation, which uses, in addition to its General Agreement on Tariffs and Trade (GATT), also the General Agreement on Trade in Services (GATS) and Trade-Related Aspects of Intellectual Property Rights (TRIPS), among others, as relevant liberalization components (Singh 2006: 41 f).

When trade liberalization started to expand in the early 1990s, negative environmental and social impacts as a result of the liberalization process also became an important issue. The public consistently expresses its concern over these impacts of trade liberalization and integration through riots and demonstrations during international economic meetings (for example, the Summit of the Americas in Quebec in 2007 and the WTO round negotiations in Seattle in 1999) (Agence France Presse 2007, Junge Welt 1999).

Opinions vary on the social and environmental impacts of trade liberalization. Supporters who favor free trade tend to hold the “all boats will rise” view. They expect these accords to yield a positive economic impact in terms of the gross domestic product of all countries involved: the presumed scenario is that when trade increases due to fewer trade restrictions, all signatory countries in the agreement – including the less developed ones – will benefit economically. The economic increase will gradually lead to higher environmental, labor and social standards (Altmann 2002, Pfahl 2000). Politically, NAFTA was thus regarded as a way for Mexico to “catch up [economically] with its northern neighbors” (Lederman et al. 2005: 27).

In contrast, opponents of free trade assert that trade agreements cause further environmental degradation and social injustice, and they fear a “race to the bottom” scenario (Markell, Knox 2003: 4 ff, Tweedie 2006: 855). Asking companies to take social and environmental issues into account is often regarded as burdening them with expensive production costs that the company would prefer to reduce in order to remain internationally competitive. Trade agreements seem to create opportunities for shifting production to countries with weaker regulations and therefore a weaker application of environmental and social standards. Companies who leave countries with stricter regulations are often criticized for turning their new production locations into “pollution havens” and intensifying environmental degradation there. This view was a widely voiced public concern during the NAFTA negotiations (Pfahl 2000: 15 ff, 46 ff, Hufbauer, Schott 2005: 163 by example of NAFTA).

Economically weaker countries are commonly expected to have weaker environmental laws and a weaker application of these laws. These countries could turn into so-called “pollution havens” by attracting highly polluting industries, leading to a rise in pollution within their territories. Those countries with higher environmental standards could be pressured by this regional shift to lower their domestic standards (e.g., NAFTA in Hufbauer Schott 2005: 6 f, Markell, Knox 2003: 4 ff, Altmann 2002: 48 f).

The relationship between trade liberalization and the environment has been gradually making its way onto the agenda of international meetings and negotiations. The WTO established a Committee on Trade and the Environment (WTO, no date: Trade and Environment, id.: Items on the CTE’s Work), that deals with the coordination between WTO free trade regulations and multilateral environmental agreements (id.: Negotiations on trade and the environment). On the regional level, trade agreements include environmental aspects in their economic accords; examples here are the NAFTA (1992, see Chapter 6) and the Central America-Dominican Republic-United



States Free Trade Agreement (US-CAFTA-DR 2004) (Schatan, Muñoz Villarreal 2005).

The environment-trade link also became an international topic when it was integrated into the Principles of the Rio Declaration on Environment and Development (1992). Principle 12, for example, asserts that “[s]tates should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation.” Furthermore, international agreements have been developed that conjoin trade regulations and environmental protection, for instance, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1973).

In the past 15 years, several countries and institutions developed methodologies to assess the actual environmental and sustainable impacts of trade agreements through environmental and sustainability assessments, for instance, the OECD,<sup>49</sup> Canada, the US and the European Union (Podhora 2007a: 8 f).

The North American Free Trade Agreement (NAFTA) is an economic agreement signed at the beginning of this new trade era. The following chapter describes the possible influence of trade liberalization on the environment and describes NAFTA, as the economic accord relevant for the dissertation, in greater detail.

## 5.1 NAFTA

Canada, the US and Mexico signed the North American Free Trade Agreement (NAFTA) in December 1992 (Gehring 2007: 152, NAFTA Secretariat 2004: Frequently Asked Questions and Answers). The negotiations of the accord ended once it was signed and the agreement has not been re-opened for negotiations (Mace, Bélanger 2004: 112).

In August and September 1993, respectively, the three countries signed two parallel agreements to NAFTA: the North American Agreement on Environmental Cooperation (NAAEC) (Johnson, Beaulieu 1996, id.: 123, Expert G) and the North American Agreement on Labor Cooperation (NAALC) (Secretariat of the Commission for Labor Cooperation, no date: The NAALC, see Chapters 5.2.1, 5.2.2). All three agreements came into force on January 1, 1994 (NAFTA 1992: Art. 2203, NAAEC 1993: Art. 47, NAALC 1993: Art. 51). This event, in which the economic section of a trade agreement was extended through accords on environmental and labor cooperation, was unique (Hufbauer, Schott 2005: 178, Expert C).

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<sup>49</sup> In 1994, the OECD created the first framework for the analysis of environmental impacts caused by trade (OECD 1994).

### 5.1.1 NAFTA's Objective and Economic Content

Even before negotiations over NAFTA began, strong economic binational relationships between Canada and the US and the US and Mexico already existed. The Canadian US Free Trade Agreement of 1989 (CUSFTA) and Mexico's Maquiladora Program of 1965 set important precedents for NAFTA (Wannöffle 1995: 37 ff). Regarding economic aspects, the concepts and the framework of the CUSFTA can be seen as NAFTA's "foundation stone" (Council on Foreign Relations 2005: 18).

NAFTA is a regional trade agreement between Canada, the US and Mexico as neighboring countries (NAFTA Secretariat 2004: Frequently Asked Questions and Answers). It is a "multilateral preferential trading and investment arrangement" (EPA 2009: Environment, Trade, and Investment). The main objective of NAFTA was to promote economic growth through the creation of an economic framework in North America (Mace, Bélanger 2004: 111). The Mexican Ministry of Economy, as an example of a domestic department responsible for NAFTA matters, summarizes six central objectives for the trade agreement (Secretaría de Economía, no date: TLC con EE.UU., México y Canadá. Tratado de Libre Comercio con EE.UU., México y Canadá):

- Elimination of trade barriers,
- Promotion of conditions for fair competition,
- Increased opportunities for inversion,
- Protection of intellectual property rights,
- Procedures for the implementation of the dispute settlement within NAFTA, and
- Establishment of trilateral, regional and multilateral cooperation.

The core of NAFTA is the complete liberalization of trade, which not only reduces but eliminates the tariffs (Wannöffle 1995: 38). The agreement applies to goods considered to be of North American origin (Kunimoto, Sawchuk 2006: 275 ff). Trade liberalization under NAFTA has proceeded step-by-step over the last 15 years since the agreement came into force (Hufbauer, Schott 2005: 5 ff). Tariffs were either completely eliminated as soon as NAFTA was introduced, or gradually eliminated in a process of five to ten steps (Secretaría de Economía, no date: TLC con EE.UU., México y Canadá. Tratado de Libre Comercio con EE.UU., México y Canadá). This timeline was supposed to allow the countries and the national industries to become competitive under the new regulations (Expert G)<sup>50</sup>.

NAFTA's legal text is "highly detailed" (Abbot as cited in Mace, Bélanger 2004: 112). It consists of a preamble and eight parts that are divided into 22 articles (NAFTA 1992, see Annex II). The agreement addresses, among other things, the following items: energy and basic petrochemicals (Chapter 6), agriculture and sanitary and phytosanitary

<sup>50</sup> Though NAFTA is generally a symmetrical agreement, several exceptions apply to Mexico. Mexico's monopoly concerning petroleum and electricity (in terms of the exploration and exploitation of gas and the establishment of petrol stations) is an example of these exceptions (Singh 2006, Hufbauer, Schott 2005: 23).

measures (Chapter 7), telecommunications (Chapter 13), financial services (Chapter 14) and intellectual properties (Chapter 17) (NAFTA 1992). In sum, “NAFTA encouraged structural reform of the three economies, [but] it left the task of managing the adjustment process to each government” (Hufbauer, Schott 2005: 468).

The Free Trade Commission of NAFTA “comprises the ministers responsible for international trade in the three NAFTA partner countries.” The NAFTA Secretariat supports the work of the Commission as an “independent agency” (NAFTA Secretariat 2004: Frequently Asked Questions and Answers), however, the Secretariat is by far not as strong as the CEC Secretariat (Expert J, see Chapter 6, 6.2.1.2). Apart from the work of the Secretariat, all NAFTA regulations are supervised by the Free Trade Commission (CEC 1997: 13). Unlike the Commission for Environmental Cooperation and the Commission for Labor Cooperation, which both have a permanent secretariat to assist them in their tasks (see Chapters 5.2.1, 5.2.2.), the Free Trade Commission does not have a permanent Secretariat to support it (Ten-Year Review and Assessment Committee 2004: 24).

Furthermore, assisting committees also have been organized, whose work is specified in NAFTA. They sometimes include matters of environmental responsibility – such as agricultural issues – in their work. The responsibilities assigned to these committees concerning environmental protection may be increased, for example, the Committee on Standards-Related Measures may establish additional bodies to deal with risk assessment methodologies (CEC 1997: 13). Figure 7 describes the interaction between NAFTA and its environmental committees and tasks and the Commission for Environmental Cooperation (see Chapter 6.2).

NAFTA was designed in accordance with the regulations for trade liberalization provided by the General Agreement on Tariffs and Trade (GATT). It usually takes precedence over other trade agreements in the event that they contradict NAFTA (Altmann 2002: 97).

NAFTA’s members are neither obliged to unify trade relations against third parties nor to include NAFTA in a transfer of duties from national to trinational bodies. NAFTA also does not introduce any additional instruments that would improve the economic decline between the parties. In sum, NAFTA basically stabilized the trade relations that already existed among the three countries (Sangmeister, Melchor del Río 2004: 71).

Despite the economic differences among the signatory parties, the three countries joined NAFTA as basically equal partners with only few instances of preferential treatment, unilateral exceptions or asymmetric procedures. NAFTA is a purely economic agreement and promises neither mutual assistance nor solidarity (Mace, Bélanger 2004: 111).

### 5.1.2 NAFTA’s Environmental Content

Though NAFTA is an economic agreement, it includes several references to environmental protection. The NAFTA Preamble (NAFTA 1992) states that the

signatory countries will “UNDERTAKE each of the preceding in a manner consistent with environmental protection and conservation [...], PROMOTE sustainable development [...and] STRENGTHEN the development and enforcement of environmental laws and regulations.” NAFTA itself includes the following environmental aspects (CEC 1997: 12 f):

- Chapter 1: environmental considerations have primacy over trade considerations with respect to multilateral agreements concerning endangered species, ozone depletion and hazardous waste disposal (Art. 104),
- Chapter 7: each party may choose the legal framework it considers appropriate regarding sanitary and phytosanitary standards (Art. 1114),
- Chapter 9: each party may choose the legal framework it considers appropriate regarding standard-related measures,
- Chapter 11 (Art. 1114): the signatory countries are not allowed to lower their environmental standards or the implementation of these standards in order to attract new investors,<sup>51</sup> and
- Chapter 20: the countries aim to establish new support mechanisms for environmental issues within dispute settlements.

The fact that NAFTA negotiations closed in 1992 and the NAAEC was signed only in 1993 may partly explain why no references to the environmental agreement were included in NAFTA.

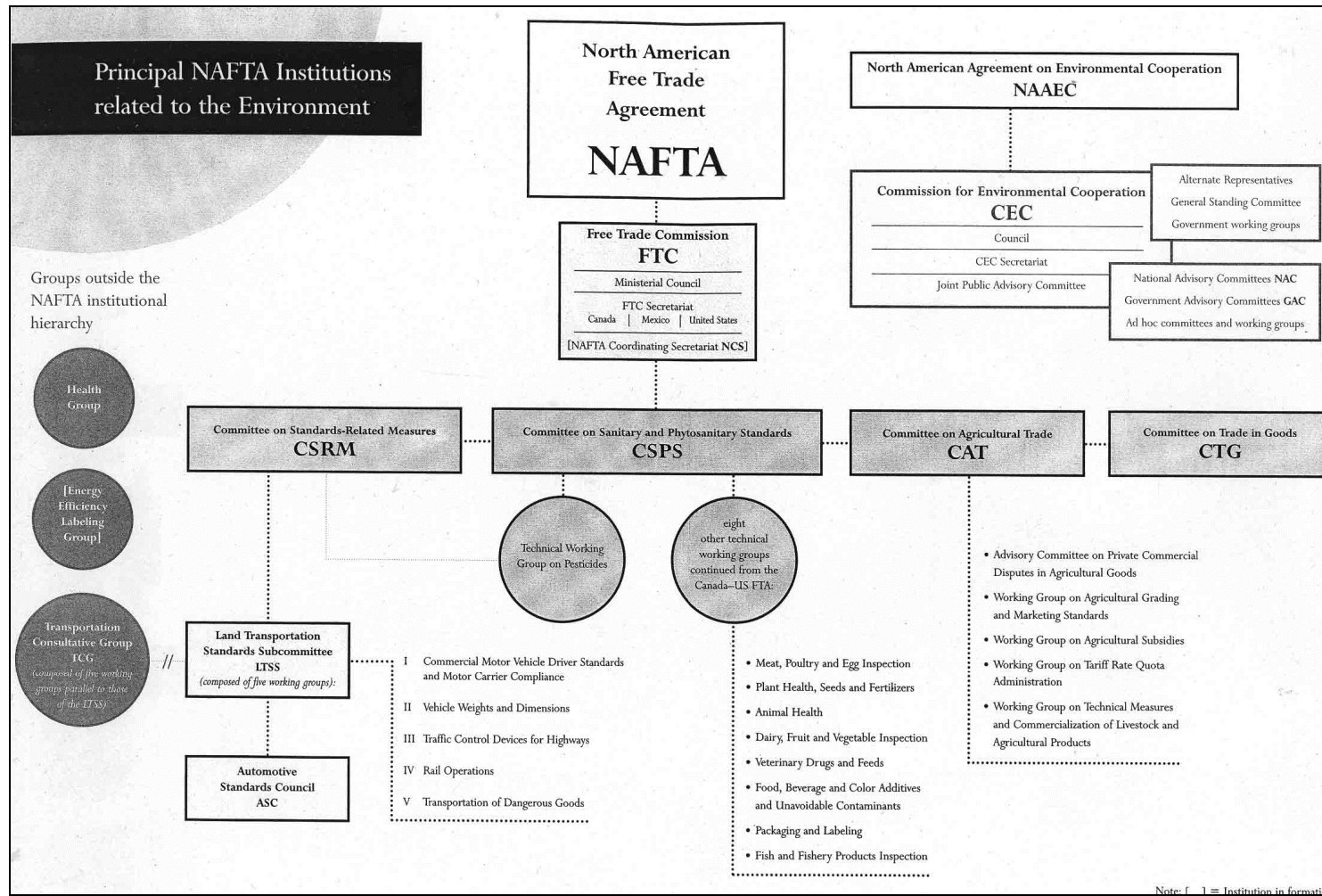
The following figure presents the environmental activities realized under NAFTA. It clearly demonstrates the missing links between NAFTA with its working groups as economic agreement and the NAAEC as environmental agreement, and between the Free Trade Commission and the CEC (see also Ten-Year Review and Assessment Committee 2004: 24) (see Chapter 6.2).

NAFTA itself does not refer to NAAEC, to other environmental agreements or to environmental instruments (Ludwiszewski, Seley 1996: 3 ff). NAFTA enables states and provinces to enforce stronger environmental laws on their own, and thus guarantees them this right (Sánchez 1994: 96).

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<sup>51</sup> The environmental problems that originate from NAFTA’s Chapter 11 are not part of the present dissertation.

Figure 7: NAFTA's Institutions



(CEC 1997, no page number. fold out page

### 5.1.3 The Economic Significance of NAFTA

In the early 1990s, the implementation of the free trade concept between industrialized countries and a less developed country was a groundbreaking event (Altmann 2002: 97). The three countries had different reasons for negotiating NAFTA. Mexico wanted to gain free access to the world's biggest national economy, the US market (Hufbauer, Schott 2005: 3). The US, however, was more interested in assuring Mexico's reliability as a trading partner for the US (Altmann 2002: 98). NAFTA was seen as a guarantee against another economic crisis in Mexico (Sangmeister, Melchor del Río 2004: 67 ff). Canada already had reliable access to the US market even before NAFTA came into force, through the CUSFTA trade accord; however, the country feared a negative impact on its status quo a binational US-Mexican Free Trade Agreement went forward without Canada (Hufbauer, Schott 2005: 3).

At present, NAFTA is the biggest regional economic area in the world. Due to its territorial size, it plays an important role in the world trade system (Altmann 2002: 97). In 2005, the North American hemisphere produced merchandise valued at 824 billion US\$ via intra-regional trade (WTO 2006: 37).<sup>52</sup> As a trading block, NAFTA is economically strong enough to compete with the European Union or Asian trade areas (Mace, Bélanger 2004: 110).

Hufbauer and Schott (2005: 473, id.: 19 ff) consider automobiles (20% of the export/import rate), energy (7%) and agriculture (5%) as "the three largest markets for North American trade" (id.: 473). The automobile sector (including auto parts) is, with its large contribution to intra-regional trade, the most relevant single sector. The reasons for this can be found, for example, in the ratification of NAFTA itself as well as domestic reforms in Mexico (id.: 19 ff).

The actual economic impact of NAFTA is a controversial subject. Even before NAFTA came into force, the external tariffs among the three countries were comparatively low. According to Altmann (2002: 98), intra-regional trade has grown steadily but not significantly (1990-1997). In the short term, only a small economic advantage can be detected. The US Council on Foreign Relations (2005: 1), however, states, that trade among the three countries has tripled in the last ten years. The "value of trade [...] has more than doubled" within North America (id.: xvii). The three countries are each other's most important trading partners (id.: 1). Among the signatory countries, however, a significant asymmetry in trade exists: the US produce almost 90% of the gross national product within North America (Mace, Bélanger 2004: 110 ff, esp. 112). Furthermore, Canada and Mexico depend greatly on the US for their external trade, as described in Chapter 3.1.1 and 3.3.1. Mace and Bélanger (id.: 107) suggest that NAFTA's impact on the macro-economy of the three countries has apparently been

<sup>52</sup> Other trade statistics state a different amount of trade value, possibly due to different data that was incorporated. The WTO data is chosen here in order to provide statistical data that does not originate directly from one of the NAFTA countries.

positive. They emphasize, however, that NAFTA sometimes has a negative impact on the micro-economic level; for example, some Mexican farmers have been “severely hit.” In conclusion, Hufbauer and Schott (2005: 467) assert that „NAFTA has succeeded in advancing economic integration“ and “[i]n some dimensions, it has surpassed expectations”: economic development in the NAFTA region more than doubled from 6 trillion US\$ in 1994 to 12.5 trillion US\$ in 2004 (id.: 1, based on different statistics than the WTO reference mentioned).

Hufbauer and Schott (2005: 471) describe the role of free trade agreements as “way-stations to bigger deals.” Beyond the economic impacts on the North American hemisphere, additional impacts on the international level can be found. NAFTA was seen as a blueprint and an extension to the prospective Free Trade Area of the Americas (FTAA), which included all of the countries in the Americas (with the exception of Cuba) (Free Trade Area of the Americas 2006: Links to FTAA Countries, Sangmeister 2003: 4, 6, Cordonier et al. 1999: 7). NAFTA may also influence long-term plans for trade accords with the Middle East (Hufbauer, Schott 2005: 471). Furthermore, Mexico gained a special status within the group of less developed countries (Sangmeister, Melchor del Río 2004: 65) and can thus be seen as a “prime example” of how a less developed country can benefit from free trade with industrialized countries (Altmann 2002: 98).

## 5.2 NAFTA's Side Agreements

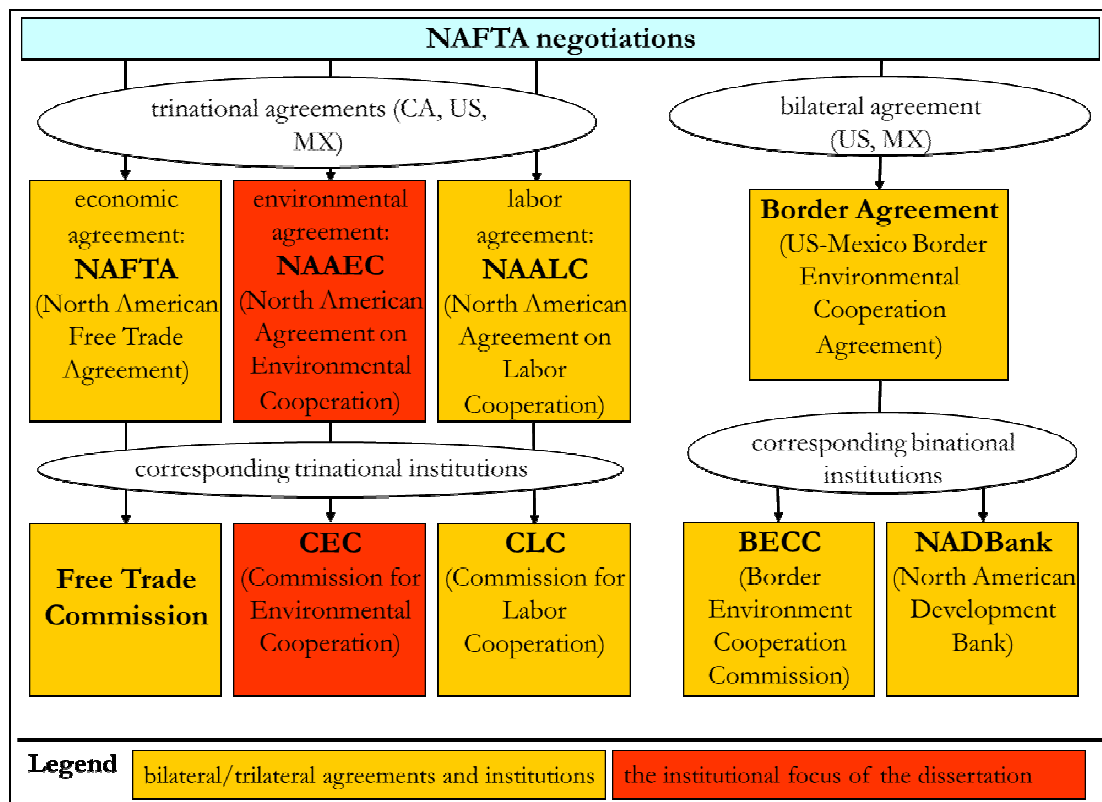
Environmental and labor issues played a relevant role during the ratification process of NAFTA and incited intense discussion on the national level. The public in all three countries expressed reservation and resistance to NAFTA. With respect to the environmental impacts of NAFTA in North America, the critiques mainly focused on two aspects: a general weakening of the environmental standards in North America and especially the risk of severe environmental impacts in Mexico. Regarding Mexico, the concern was mainly based on Mexico's experience with the maquiladora industry (Markell, Knox 2003: 4 ff).

These environmental concerns were also reflected on the political level when NAFTA was expected to find support in the US Congress (id., Expert E). Especially in the US, dissatisfaction with NAFTA became evident during election campaigns (Hufbauer, Schott 2005: 6 ff).

Because of these concerns, NAFTA became the first free trade agreement to include supplementary agreements on environment and labor (Altmann 2002: 139 f). Canada, the US and Mexico established trilateral agreements on environmental and labor cooperation and the US and Mexico signed a border agreement. Beyond the brief description of the three agreements supplied here, NAFTA's environmental side agreement is further described in Chapter 6.

The agreements and institutions that originated from the NAFTA negotiations are illustrated in Figure 8.

Figure 8: Agreements and institutions originating from the NAFTA negotiations (author's compilation, according to NAAEC 1993: Art. 8-11, NAALC 1993: Art. 8-13, Agreement between the Government of the United States of America and the Government of the United Mexican States Concerning the Establishment of a Border Environment Cooperation Commission and a North American Development Bank 1993)



### 5.2.1 The Trilateral Agreements: The North American Agreement on Environmental Cooperation (NAAEC) and the North American Agreement on Labor Cooperation (NAALC)

The NAAEC and the North American Agreement on Labor Cooperation (NAALC) are the two side agreements to NAFTA. Both were signed by Canada, the US and Mexico (Hufbauer, Schott 2005: 7); the signatory countries are equal partners with respect to their rights, duties and responsibilities. Both agreements address trilateral issues regarding environmental and labor, respectively, in the North American hemisphere (NAAEC 1993, NAALC 1993). They are supported by two institutions, the Commission for Environmental Cooperation (CEC) and the Commission for Labor Cooperation, both created in 1994, which reflect the scope given to them in their respective agreements (NAAEC 1993: Art. 8-11, 41, NAALC 1993: Art. 8-14, 51).

Both agreements and Commissions are completely independent from each other and do not cooperate in the execution of their work (Expert C). Furthermore, both agreements



and Commissions are detached from NAFTA. This separation is evinced by the fact that the annual budget of the Commission is not dependent upon the current economic status of NAFTA but is fixed (Expert J, Hufbauer, Schott 2005: 6 ff).

### 5.2.2 The Bilateral Agreement: The US-Mexico Border Environmental Cooperation Agreement

As the public concern about the environment also focused on the US-Mexican border, NGOs demanded a clean-up along the US-Mexican border (Markell, Knox 2003: 4 ff). NAFTA thus also triggered the development of a third agreement, the US-Mexico Border Environmental Cooperation Agreement of 1993 (BECA, here referred to as “Border Agreement”). Unlike the NAAEC and the NAALC, it was signed bilaterally between the US and Mexico. Furthermore, it only focuses on a 100km area along both sides of the border dividing the two countries and does not address environmental cooperation within the entire territories of the two signatories (BECC, NADBank 2006: 3).

The agreement recognizes “the bilateral nature of many transboundary environmental issues” and states that these issues can best be solved by joining forces. Its objective is to achieve sustainable development in the border area through the establishment of environmental infrastructure projects and of fees to be paid by polluters to finance these projects (Agreement between the Government of the United States of America and the Government of the United Mexican States concerning the Establishment of a Border Environment Cooperation Commission and a North American Development Bank 1993).

The agreement also created two sister institutions. The Border Environment Cooperation Commission (BECC) encourages the environmental development of border communities within the scope of the Border Agreement through technical and organizational support as well as project certification procedures. The North American Development Bank (NADBank) generates the necessary funding through money provided by the US and Mexico (BECC, NADBank 2006: 3. 7 ff). As far as this research could determine, the large amount of funding – more than US\$ 1 billion since 1994 (North American Development Bank 2009: NADB reaches milestone with more than US\$ 1 billion in financing for environmental infrastructure along the U.S.-México border) – is not attributable to NAFTA and its economic power.

The Border Agreement came into force on January 14, 1994 (Protocol of Amendment to the Agreement between the Government of the United States of America and the Government of the United Mexican States concerning the Establishment of a Border Environment Cooperation Commission and a North American Development Bank 1993), fourteen days later than NAFTA and its two trilateral side agreements. Since it is a bilateral agreement and came into force on a different date, the Border Agreement cannot necessarily be regarded as a side agreement to NAFTA, since NAFTA and both the labor and environmental agreements include all three North American countries. Due to its limited regional and bilateral scope, the Border Agreement and its sister

institutions correspond to the regional level in the concept of NAFTA's GREEN IMPACT (see Chapter 8.3.1, 8.4).

### **5.3 The Security and Prosperity Partnership of North America (SPP)**

In March 2005, Canada, the US and Mexico announced the Security and Prosperity Partnership (SPP) (Council on Foreign Relations 2005: 2). The SPP is based upon the existing economic interactions of the three countries (The White House 2005: Fact Sheet: Security and Prosperity Partnership of North America); observers refer to it as "NAFTA Plus" and see it as another step toward a more extensive integration of the three North American countries beyond NAFTA (Carlsen 2007: 1, Expert G).

The main objective of the SPP is to advance "collaboration in areas as diverse as security, transportation, the environment and public health" in order to build a "stronger, more secure, and more prosperous region" (Office of the Prime Minister 2006: Leaders' Joint Statement). It includes the following five central goals:

- establishing the North American Competitiveness Council,
- cooperating on the Avian and Pandemic Influenza,
- establishing the North American Energy Security Initiative,
- establishing an North American Emergency Management, and
- securing the borders.

Each of these five aspects is divided into several sub-objectives (Office of the Prime Minister 2006: The Security and Prosperity Partnership of North America: Next Steps). To address these issues, the countries established ten working groups on ministerial level around the topics of cooperation (Council on Foreign Relations 2005: 2, SPP.Gov, no date: SPP Prosperity Working Groups). The official homepage of the SPP refers neither to a separate topic-related nor general institution that addresses security and prosperity issues (id.).

The environmental aspects of the SPP are integrated into the prosperity agenda sub-item "Enhance the Quality of Life" (The White House 2005: Security and Prosperity Partnership of North America Prosperity Agenda). Some of the main objectives of the Working Group on Environment are the improvement of air and water quality and the protection of biodiversity. The homepage mentions neither transboundary EIA, nor the EIA or any other environmental instrument (SPP.Gov, no date: SPP Prosperity Working Groups).

Since the SPP is only a partnership, the three countries need to sign further bilateral or trilateral agreements with a different range of obligations in order to fulfill the premises of the SPP (for example, the Action Plan to Combat Border Violence and Improve Public Safety between Mexico and the US, as well as the development of mutual assistance arrangements between Canada and the US to address cross-border emergencies threatening public health) (id.).

The SPP aims to integrate itself into existing programs and alliances and is not supposed

to compete with them (The White House 2005: Fact Sheet: Security and Prosperity Partnership of North America). Though the SPP is also a trilateral partnership, it “is completely detached from NAFTA, NAAEC and the CEC” (Garver, Podhora 2008: 257). The SPP, however, plays a relevant role in the current political debate and negotiations concerning transboundary EIA (see Chapter 7.2).

## 5.4 Summarizing Discussion

NAFTA is a powerful economic agreement that has strong positive influences on trade among its signatory countries, though it does not necessarily benefit all social groups. It plays a relevant role for several reasons, the ones most important for this dissertation being the regional vicinity of the signatory countries, the economic importance of NAFTA for the signatory countries, and the presence of significant trade dependencies among the signatory countries.

The regional vicinity of the signatory countries, the differences in economic power among them and especially the high level of public concern triggered side agreements on environmental and labor cooperation, the NAAEC and NAALC, and a bilateral Border Agreement between the US and Mexico – altogether four new institutions. The interactions between NAFTA and its environmental side agreement NAAEC and the Border Agreement are weak from a thematic, political and financial point of view. The weak interaction between the side agreements and NAFTA shows that the side agreements lack authority, especially regarding their environment and trade links.

The SPP may be regarded as a next step towards North American integration. It contains no explicit links to NAFTA and to NAAEC, though the SPP touches environmental as well as economic activities. For the purposes of this dissertation, a central question must be asked: How can the existing institutions and agreements be linked effectively in terms of environmental assessment in order to support the greening of NAFTA?



**PART B:  
Environmental Assessment  
as Part of the NAAEC –  
Analysis with Theoretical Discussion**



## **6 Aspects of Governance and Trade in the North American Agreement on Environmental Cooperation (NAAEC)**

The negotiations over NAFTA caused strong public resistance and raised political doubts concerning the impacts of the trade agreement (Hufbauer, Schott 2005: 7, 153). These concerns mainly centered on the different environmental and labor standards of the NAFTA countries, focusing on Mexico's comparatively lower standards and weak application of these benchmarks. The public anticipated intense competition among the countries, as higher standards usually increase production costs for businesses. It was feared that companies would pressure local communities by threatening to move production to Mexico to reduce costs. Furthermore, the Mexican government was expected to relax its environmental laws even further in order to attract businesses (Markell, Knox 2003: 3, Hufbauer, Schott 2005: 153). It was foreseen that, in the long run, Mexico would turn into a haven for polluters (id.: 486) and accumulate negative environmental impacts. The existing maquiladora system, which was already having substantial negative environmental impacts along the US-Mexican border, was regarded as an example of free trade. A transfer of this experience to NAFTA meant that highly negative environmental impacts would be spread over the entire Mexican territory (Markell, Knox 2003: 3 ff, Hufbauer, Schott 2005: 4 ff).

In response to these concerns, Canada, the US and Mexico signed the North American Agreement on Environmental Cooperation (NAAEC). NAFTA was thus the first free trade accord that had an environmental side agreement (Altmann 2002: 139). In NAFTA's precedent, the CUSFTA negotiations between Canada and the US, environmental aspects had "had rarely even been raised" (Markell, Knox 2003: 1), not even by environmental NGOs (Schatan, Muñoz Villareal 2005: 11). NAFTA, however, had provoked strong public and political resistance due to Mexico's participation, a resistance which birthed a new environment and labor debate in trade liberalization. During the NAFTA negotiations, the U.N. Conference on Environment and Development in Rio de Janeiro was also taking place (June 1992). The political climate of the conference concerning environmental protection, and the Rio Declaration itself, also influenced the negotiations of NAFTA and NAAEC and are reflected in the environmental agreement (Markell, Knox 2003: 1, NAAEC 1993: Preamble, Expert G). However, the negotiations over NAAEC started after NAFTA had been closed (Markell, Knox 2003: 4 ff, Ten-Year Review and Assessment Committee 2004: 24); consequently, NAFTA makes no explicit references to NAAEC.

This Chapter 6 first adumbrates the NAAEC and provides details on the interaction between environment and trade within the context of the agreement. The chapter then analyzes the different governance levels within the NAAEC and the roles the agreement assigns to them, thereby focusing on the CEC, the nation states and the public. The chapter concludes by discussing aspects of multi-level governance and greening NAFTA within the NAAEC.

## 6.1 The NAAEC

When NAFTA entered into force in 1994, it was regarded as the “greenest” free trade agreement that had ever been implemented (Markell, Knox 2003: 7). NAAEC was intended to assure that none of the signatory countries are disadvantaged in trade if each party duly enforces its domestic legislation on environmental protection, since NAFTA was surrounded by a debate on balancing economy and environmental protection with respect to the new North American cooperation (Johnson, Beaulieu 1996, Altmann 2002: 139). As the title of the environmental accord makes clear, the main objective of NAAEC is trilateral North American environmental cooperation. NAFTA was seen as an important step to improve environmental interaction within North America (Markell, Knox 2003: 2). As NAAEC is a parallel agreement to NAFTA, it remains in force until the economic agreement is deemed null and void (Expert G).

### 6.1.1 The General Content of the NAAEC

NAAEC is a trilateral agreement that centers mainly on trilateral cooperation through the CEC, rather than providing supra-national regulations for Canada, the US and Mexico as nation states (Markell, Knox 2003: 2). Based on the idea of sustainable development (NAAEC 1993: Preamble), the accord supports the protection of all environmental media within the territory of Canada, the US and Mexico, and promotes the use of instruments and measures that protect the environment. NAAEC’s central objectives can be summarized as follows (id.: Art. 1):

- to promote domestic environmental cooperation around environmental protection and sustainable development between the NAFTA parties (id.: Art. 1(a),(b),(c),(f)),
- to “support the environmental goals and objectives of the NAFTA” (id.: Art. 1(d), without creating barriers to trade (id.: Art. 1(e)), and
- to strengthen public participation and transparency as part of environmental legal activities (id.: Art. 1(h)).

The objectives emphasize the relevance of pollution prevention (id.: Art. 1(j)), the only explicit reference to an environmental topic.

As an agreement of trilateral cooperation, the NAAEC also specifies which actions will be taken to improve cooperation, for instance:

- to notify and to provide information to other interested parties on current or future environmental measures and “possible violations” (id.: Art. 20.4) of the other party’s environmental regulations (id.: Art. 20.2, 20.3, 20.4), and
- to make efforts to resolve any conflicts within the scope of the NAAEC that may arise between the signatory countries (id.: Art. 20.1).

The NAAEC (1993) consists of seven parts<sup>53</sup> plus a Preamble, which are briefly described in the following paragraphs.

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<sup>53</sup> See Annex II for a detailed list of the content of the NAAEC (1993).



In the **Preamble**, the signatory countries explain the rationale behind their cooperation, namely the interaction of their environments and their understanding that environmental cooperation is essential for sustainable development. NAAEC's Preamble also makes the following pledges, which will form the basis of trilateral environmental cooperation:

- to maintain the sovereignty of the three countries in terms of environmental exploitation according to their national regulations, while respecting at the same time the environmental regulations of their neighbors,
- to recognize differences in the environment of the three countries and in their “economic, technological and infrastructural capabilities” (id.: Preamble), and
- to value the important influence of public participation on environmental protection.

The NAAEC cites and recognizes as reference points the Stockholm Declaration on the Human Environment (1972) and the Rio Declaration on Environment and Development (1992).

In **Part I Objectives** (Art. 1) the countries decide to “strengthen cooperation on the development and improvement of environmental laws, regulations, procedures, policies and practices” (id.: Art. 1(f)) and to improve “compliance [...] and enforcement” with regard to existing regulations (id.: Art. 1(g)). In terms of national and international environmental regulations, the NAAEC basically has two key objectives: to develop and improve domestic environmental standards, and to promote and support environmental cooperation among the NAFTA countries (id.: Art. 1(c),(f),(g)).

**Part II Obligations** (Art. 2-7) asks the countries to make general commitments on the domestic level, for example, to commit to the regular preparation of reports on the national environmental situation, and to engage in environmental education and the assessment of environmental impacts (id.: Art. 2(a),(c), (e)), see Chapter 7.1).

**Part III Commission for Environmental Cooperation** (Art. 8-19) identifies the CEC as the institution responsible for the implementation of the NAAEC. This section explains the structure of the Commission, the Council's functions, tasks and reports to the CEC, the citizen submission procedure, the role of the advisory committees and language issues (see sub-chapters 6).

**Part IV Cooperation and Provision of Information** (Art. 20-21) summarizes tasks designed to ensure effective trilateral cooperation between the nation states themselves on one side and between the countries and the CEC on the other side. It refers, among other things, to notification and inquiries regarding aspects of the NAAEC and domestic environmental regulations.

**Part V Consultation and Resolution of Disputes** (Art. 22-36) defines the procedural steps in case of a “persistent pattern of failure” (id.: Art. 22) concerning the enforcement of domestic environmental laws. It includes, among others, arbitration panels, rosters, reports and action plans as well as a suspension of NAFTA benefits.

**Part VI General Provisions** (Art. 37-45) specifies the omission of selected issues from the NAAEC, for example, the issue of how the accord may interact with other international agreements, domestic regulations and national security provisions. This section also details the funding structure of the CEC and regulations affecting its staff, and provides selected definitions of terms used in the NAAEC.

In **Part VII Final Provisions** (Art. 46-51) describes general regulations, for example, the date when the agreement enters into force as well as opportunities for amendments and the inclusion of additional signatory countries.

The **five annexes** then describe selected topics relevant to the agreement, including the monitoring of enforcement actions, certain country-specific definitions and the possible suspension of NAFTA benefits.

### 6.1.2 Governance: Governance Levels as part of NAAEC

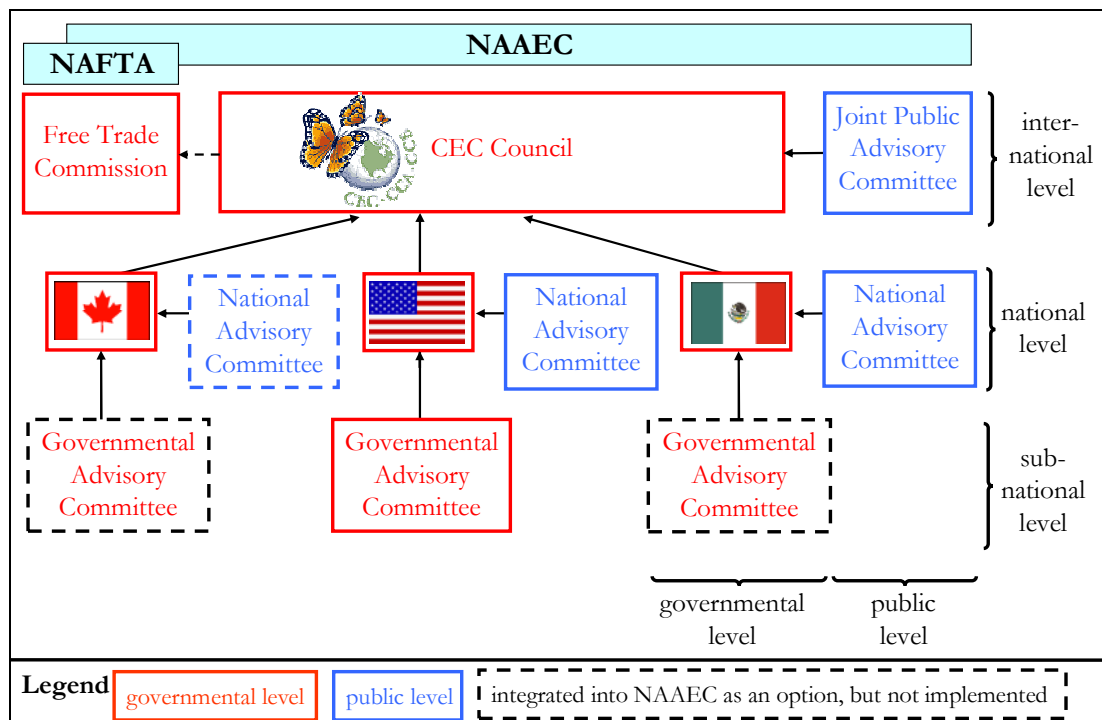
The NAAEC refers to different levels of governance. The literature identifies three interacting governance organs of the CEC: the Council, the Secretariat and the Joint Public Advisory Committee (Ten-Year Review and Assessment Committee 2004: xii, Alfie Cohen, no date/ advanced copy, no page). The NAAEC, however, defines different governmental levels with different mandates, tasks and scopes of action. These governance levels are primarily important to the dissertation and specifically include:

- the CEC as the international, intergovernmental and trilateral semi-governmental institution, supported by the public Joint Public Advisory Committee (NAAEC 1993: Art. 8-16, see Chapter 6.2),
- the nation states, possibly supported by the Governmental and National Advisory Committees (NAAEC 1993: Art. 17, 18, see Chapter 6.3), and
- civil society, specifically represented in the work of the CEC through the JPAC and the opportunity for public comments on the work of the Commission, as well as through the National Advisory Committee (if applied) on the domestic level.

Figure 9 illustrates these different levels of governance as presented in the NAAEC and as practically implemented in large part through the work of the CEC.

Figure 9: The governance levels within the NAAEC and the work of the CEC

(author's compilation, according to NAAEC 1993: Art. 8-18, CEC, no date: Governmental Advisory Committees, id.: National Advisory Committees, Government of Canada 2007: Canada's National Advisory Committee on the NAAEC, U.S. Environmental Protection Agency 2009: National Advisory Committee)



These institutionalized governmental levels interact in different forms with each other and thus are further described in the following sub-chapters (6.2 ff).

### 6.1.3 Trade: Trade as part of the NAAEC

The interaction between the NAAEC and trade liberalization, especially NAFTA, can be generally characterized in two ways: as direct and indirect.

First, a direct connection to NAFTA exists, as the countries acknowledge the “growing economic and social links between them, including the North American Free Trade Agreement (NAFTA)” (NAAEC 1993: Preamble). One of the central objectives of the NAAEC is to promote environmental goals mentioned in NAFTA<sup>54</sup> and avoid the establishment of new trade barriers (id.: Art. 1(d), (e)). Additionally, some parts of the NAAEC refer to environmental issues related to “economic development” (id.: Art. 10.2(l)).

Furthermore, NAAEC Article 10.6 (referring to the Council Functions) assigns the CEC the task of cooperating with and assisting the Free Trade Commission of NAFTA.

<sup>54</sup> The NAAEC does not explicitly list NAFTA’s environmental goals (see Chapter 5.1.2 for these objectives).

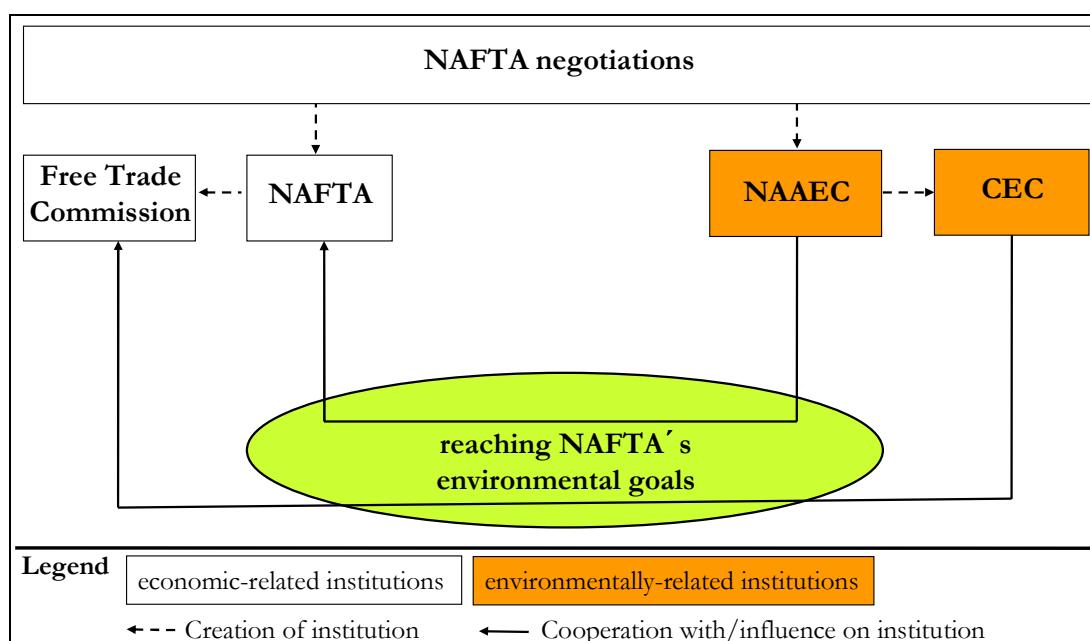
Contributing to NAFTA's environmental goals is thus one of the duties of the Commission, and can be broken down into the following five objectives (see Chapter 6.2.2, 6.2.3):

- to function "as a point of inquiry" for the public (Art. 10.6(a)),
- to assist during the consultation process established by NAFTA's article 1114 (Art. 10.6(b)),
- to support "the prevention or resolution of environment-related trade disputes," such as through the establishment of recommendations (Art. 10.6(c)), and
- to continuously assess NAFTA's environmental impacts (Art. 10.6(d)) (see Chapter 7.3),
- to provide assistance to the Free Trade Commission "in environment-related matters" (Art. 10.6(e)).

Figure 10 illustrates the relationships between NAFTA and NAAEC and their respective commissions, the CEC and Free Trade Commission, which are further described in this chapter.

Figure 10: The interaction between NAFTA and NAAEC

(author's compilation, according to NAAEC 1993: mainly Art. 10.6, Expert C)



Second, several of NAAEC's articles point indirectly to the process of trade liberalization under the free trade agreement. NAAEC was intended to prevent the signatory countries from reducing their environmental regulations and standards via the liberalization process in order to attract more business. To prevent this chain reaction from occurring, several articles support the application and even the improvement of domestic regulations (inter alia Art. 1 and 3). The citizen submissions procedure (see

Chapter 6.2.2), for example, can also be a method for monitoring the regular domestic implementation of the countries' laws (Blair 2003: 296). Furthermore, the countries committed themselves to establishing "judicial, quasi-judicial or administrative enforcement proceedings" on the domestic level that serve as sanctions for the violation of environmental regulations (NAAEC 1993: Art. 5.2). These sanctions might include general fines and the closure of facilities (id.: Art. 5.3).

As a trilateral approach to assuring compliance with domestic environmental laws, the NAAEC includes a supra-national dispute settlement procedure: Any party may request a consultation in order to evaluate whether another party has failed to "effectively enforce its environmental law" (id.: Art. 22.1). The solution procedure consists of several steps, including the search for "mutually satisfactory resolutions" (id.: Art. 22.4), a consultation with the CEC Council (id.: Art. 23.1), the establishment of working groups and recommendations (id.: Art. 23.4(a),(c)) and a series of reports including an Action Plan for resolving the dispute or removing the offense (id.: Art. 31-35). In the worst case – in case of "persistent pattern of failure to effectively enforce a domestic law" (id.: Annex 34) – trade-related sanctions and the suspension of NAFTA's benefits can be applied as a tool to secure environmental protection (id.: Art. 34-36)<sup>55</sup>.

In this dispute settlement procedure, the NAAEC only mentions contempt of national environmental law and refers neither to the implementation of the NAAEC itself nor to any other international, binational or transboundary agreement or regulation.

## **6.2 The Role of the Commission for Environmental Cooperation (CEC) in the NAAEC**

The North American Commission on Environmental Cooperation (CEC, the "Commission") was created by the governments of Canada, the US and Mexico in 1994 in order to realize the goals of the NAAEC and to promote its objectives: "The CEC addresses environmental issues of continental concern, with particular attention to the environmental challenges and opportunities presented by continent-wide free trade" (CEC 2005: CEC Ministerial Statement). The CEC has three central objectives:

- (1) to improve trilateral cooperation in order to meet the environmental goals of NAFTA and NAAEC,
- (2) to guarantee that the signatory countries comply with their domestic environmental legislation, and
- (3) "to mediate environmental disputes" (Hufbauer, Schott 2005: 157).

The CEC "the first international organization created to address issues related to trade and the environment" (Markell, Knox 2003: ii). Public participation and transparency

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<sup>55</sup> As far as could be identified during the research, the dispute settlement procedure has not been applied so far. This aspect was no central topic during the research, though.

are high priorities within the Commission (Expert L), and in this aspect of its mandate it is unique worldwide (Expert L, Expert M). The NAAEC established a very broad scope for the CEC, empowering it to “address almost any environmental issue arising anywhere on the continent” (Markell, Knox 2003: 10).

The Commission consists of a Council, a Secretariat and a Joint Public Advisory Committee. Just as in the NAAEC, the signatory countries have equal rights and powers in the work of the Commission (Expert M), thus making the CEC a “semi-independent” institution (Charnovitz 1996: 42). In its work, the CEC is entirely bound by the decisions of the CEC Council, whose members are acting as national environmental representatives. Beyond the limits the Council sets, the Commission cannot receive any instructions from any other national or international institution (Markell, Knox 2003: 12, Charnovitz 1996: 31 f). However, the CEC does not have any supra-national powers in terms of mandating policy; countries completely retain their national sovereignty (Sánchez 1994: 100, NAAEC 1993: Art. 3).

The Commission’s headquarters are based in Montréal, Canada (CEC, no date: Contact Us).<sup>56</sup> Each country provides an equal share of 3 million US\$ to the annual budget for a total budget of 9 million US\$ (CEC 2006: 5, Expert R).

In sum, the CEC is an advisory organ, whose influence on the nation states can be regarded as low (Expert B).

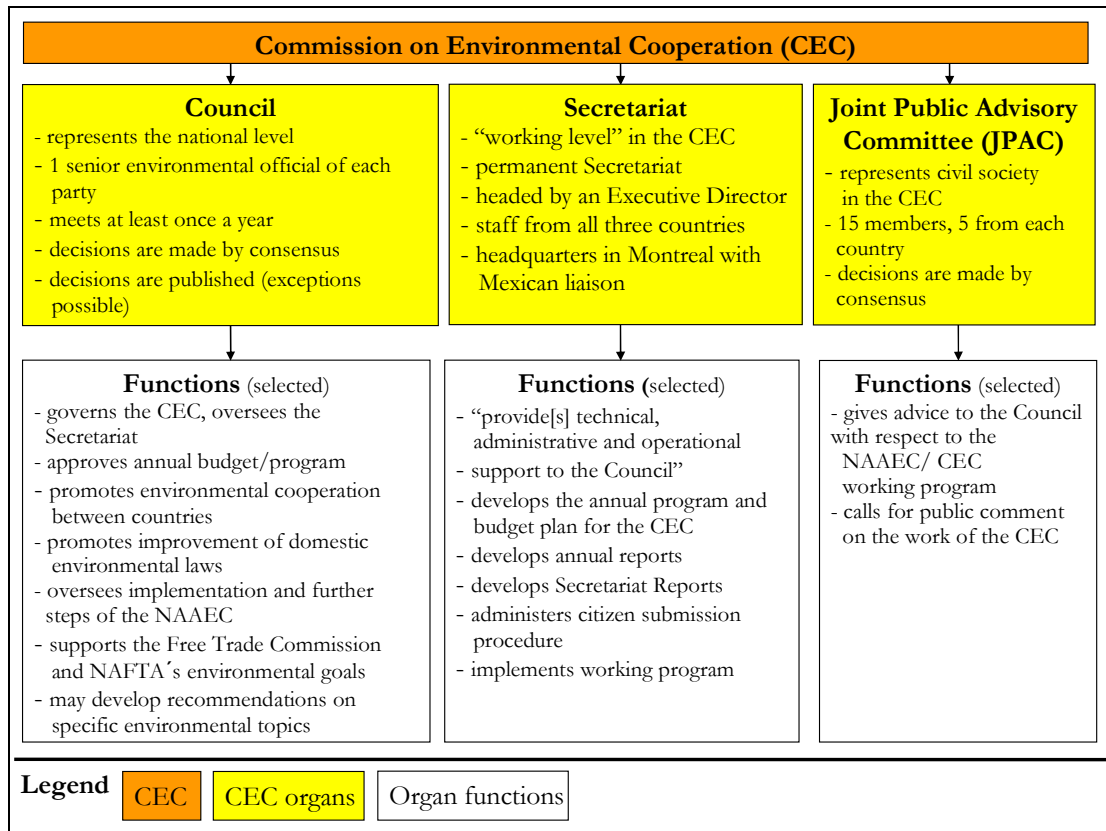
### 6.2.1 Governance: The CEC Organs

The CEC is the core of the NAAEC (Expert L). Its structure, tasks and scope of action are specified in the NAAEC, especially in Part Three (NAAEC 1993). Additional sections of the NAAEC detail the role of the CEC in certain aspects of trilateral importance, for example, on provision of information (id.: Art. 21). Figure 11 illustrates the structure and functions of the CEC organs as they are described in the following sub-chapters.

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<sup>56</sup> In November 2006, during the research stay in Mexico, a liaison office was situated in Mexico City, Mexico. In November 2008, the homepage only listed a representative for the liaison office. Neither an office nor a representative is listed for the US (CEC, no date: Who we are/ Secretariat).

Figure 11: The structure and functions of the CEC and its organs  
(author's compilation, according to NAAEC 1993: Art. 8-16)



### 6.2.1.1 The Council

The NAAEC describes the tasks of the Council in Section A “The Council,” articles 9 and 10.

The CEC is headed by a Council consisting of high level cabinet representatives. The Council is composed of the three federal ministers or equivalent representatives (NAAEC 1993: Art. 9.1): the Minister of Environment Canada, the Administrator of the US EPA<sup>57</sup>, and the Secretary of the Mexican SEMARNAT (International Relation Center 2004: 1, Ten-Year Review and Assessment Committee 2004: xi), and thereby forms a trinational body of the three key domestic environmental governmental representatives (Expert B). The Council represents the voice of the signatory countries within the CEC; however, the CEC and the Council decisions do not have any authority over decisions of the nation states. Although the Council decides on the working program of the Commission and thus influences the CEC and its tasks, the results of the working program do not have any mandatory effect on domestic policies or

<sup>57</sup> The NAAEC and the CEC Council are the only international institutions in which the US EPA has the lead. The US Department of State usually has the lead in international agreements (Expert M).

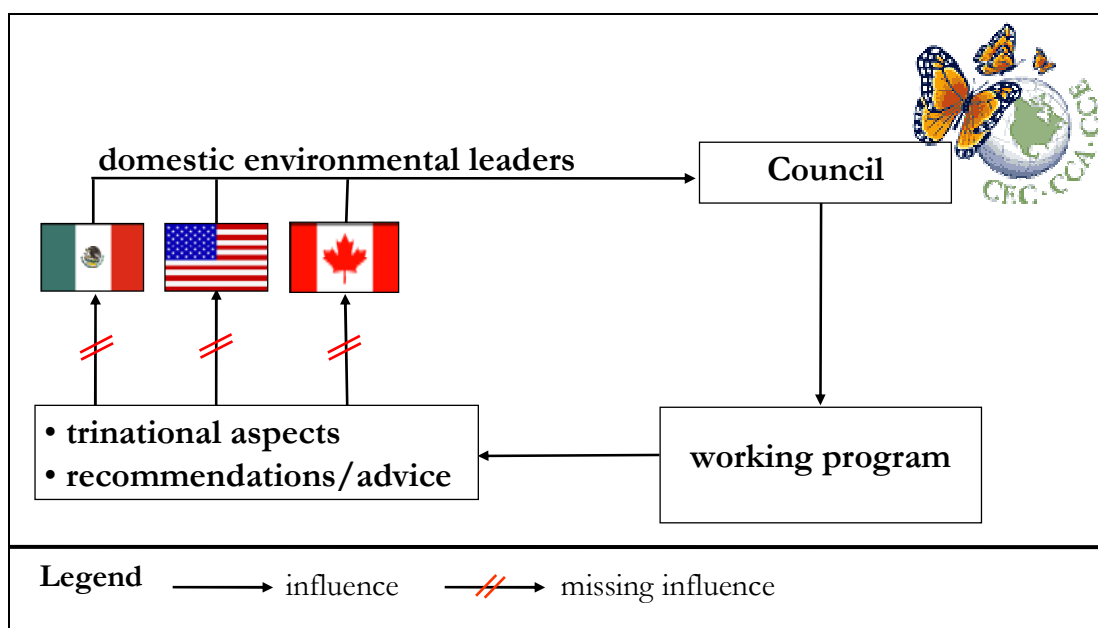
trilateral environmental cooperation. Thus the role of the Commission can be described as one of providing assistance through recommendations and analyses, rather than through politically binding decisions and directives.

Though the Council decides on the working program of the Commission and thus influences the CEC and its tasks, the results of the working program do not have any obligatory impact on the domestic policies and trilateral environmental cooperation. Thus role of the Commission can be found in providing assistance through recommendations and analyses, rather than through politically binding decisions and directives.

Figure 12 illustrates the interaction between the CEC and the CEC Council and the signatory countries, focusing especially on the elaboration of the working program. The diagram clearly illustrates that supra-national influence on the national level is lacking.

Figure 12: The interaction between CEC and nation states using the example of the working program

(author's compilation, according to NAAEC 1993: mainly Preamble, Art. 3, 10, Expert M)



Article 10 of the NAAEC defines the Council Functions. This article is essential to the work of the CEC, as the functions assigned herein are given directly to the three environmental leaders of the signatory countries and therefore draw attention to particular issues. The Council serves as the “governing body of the Commission” (NAAEC 1993: Art. 10.1) and manages, for example, the “further elaboration of this Agreement [the NAAEC]” (id.: Art. 10.1(b)), supervises the work of the Secretariat (id.: Art. 10.1(c)), and approves the Commission’s budget and working program (id.: Art. 10.1(e)).



Further tasks of the Council are mainly geared toward two goals: to establish recommendations and to promote certain actions, whereby the “Article 10(2) outlines a virtually unlimited range of environmental topics for which the Council may develop recommendations” (Garver, Podhora 2008: 256), including but not limited to:

- methodology (inter alia for pollution prevention, NAAEC 1993: Art. 10.2(b)),
- transboundary topics such as long-range transport pollutants (id.: Art. 10.2(g)),
- protection of flora and fauna (for example id.: Art. 10.2(i),(j)), and
- interaction between economy and environment (for instance “environmental matters as they relate to economic development,” id.: Art. 10.2(l)).

Besides these concrete suggestions, Article 10.2(s) leaves open the possibility to include “other matters as it [the Council] may decide.” The recommendations for transboundary EIA are described separately in the Article 10.7 (see Chapter 7.2).

Regarding the promotion of environmental issues, further Council functions refer to the promotion (and possible elaboration of recommendations) on

- the access of the public to information on environmental issues,
- public participation, and
- limits on selected pollutants due to their interaction with ecosystems (id.: Art. 10.5).

Apart from the general promotion and development of recommendations, the NAAEC assigns two types of institutional interconnectivity to the CEC, one dealing with the nation states and the other with the Free Trade Commission. On the national level, the Council is supposed to encourage the signatory countries to comply with and to improve their domestic regulations, and to strive for cooperation between them (id.: Art. 10.3, 10.4). Of special relevance here are domestic procedures surrounding transboundary pollution, specifically having to do with access, rights and remedies for citizens who may be harmed by domestic and transboundary pollution (id.: Art. 10.8, 10.9). At this point, Article 10 reveals that the Council lacks any kind of direct influence upon the nation states, and must resort to indirect ways of supporting and promoting environmental aspects on the domestic level.

The last Council Function that needs to be mentioned concerns interactions between the CEC and the Free Trade Commission and the environmental aspects of NAFTA (id.: Art. 10.6). This task is further described in Chapter 7.3.

Council decisions and activities are usually determined by consensus (id.: Art. 9.6) and a two-thirds vote, respectively, and are then published (unless the Council decides otherwise) (id.: for example Art. 9.6, 9.7, 12.1, 15.7).<sup>58</sup> The annual meetings of the

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<sup>58</sup> These provisions are in force as long as decisions are not in conflict with the Agreement and the Council does not decide otherwise.

Council (more meetings upon request (id.: Art. 9.3)) also include public meetings (id.: Art. 9.4).

### 6.2.1.2 The Secretariat

The scope of the Secretariat is described in NAAEC Section B “The Secretariat,” Articles 11-15.

The Secretariat is headed by an executive director, who usually serves a three-year term. The position rotates among the three NAFTA countries (NAAEC 1993: Art. 11.1). The Secretariat’s and the director’s main functions are:

- to “provide technical, administrative and operational support to the Council,” to the committees and to their working groups (id.: Art. 11.5),
- to provide information to the public and the signatory countries (id.: Art. 11.7), and
- to present the annual program and budget of the CEC to the Council (id.: Art. 11.6).

The Secretariat implements the working program of the CEC, which entails developing the annual report of the Commission that includes past and approved future activities of the CEC (id.: Art. 12.2(a),(b),(c)), “relevant views” that were submitted by the public (id.: Art. 12.2(d)) and recommendations made concerning aspects of the NAAEC (id.: Art. 12.2(e)). Furthermore, the Secretariat elaborates on the Secretariat Reports and administers the citizen submission procedure (id.: Art. 13, 14, 15; see Chapters 6.2.2.2.1, 6.2.2.2.2). All publications and reports edited by the Secretariat are usually published (unless the Council decides otherwise) (for example id.: Art. 15.7).

The work of the Secretariat is dependent upon the approval of the Council and, therefore, the decisions of the national environmental representatives.

### 6.2.1.3 The Joint Public Advisory Committee (JPAC)

The scope and the tasks of the Joint Public Advisory Committee (JPAC) are detailed in Section C “Advisory Committees,” Article 16<sup>59</sup>.

The JPAC consists of fifteen members, five experts from each country (NAAEC 1993, Art. 16.1). The committee represents the public in the CEC (JPAC, no date) and consists, among others, of representatives of NGOs, scientists and associations (CEC, no date: List of JPAC members).

The JPAC mainly plays an advisory role to the CEC in order to support:

- the Council, by dint of advice concerning issues that are currently integrated into the NAAEC, their implementation and the further development of the agreement

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<sup>59</sup> Besides the JPAC, the NAAEC refers to the creation of National Advisory Committees and Governmental Committees in its Section C (see Chapter 6.3.3, 6.3.4). NAAEC 1993: Art. 8.2, however, states that “The Commission shall comprise a Council, a Secretariat and a Joint Public Advisory Committee.” The National Advisory and the Governmental Committees are not mentioned directly as part of the Commission.

(NAAEC 1993: Art. 16.4),

- the Secretariat, by dint of “technical, scientific or other information” (id.: Art. 16.5).

The JPAC meets at least once per year parallel to the annual session of the Council (Art. 16.3); however, it usually meets more frequently (CEC, no date: Publication and Documents – Joint Public Advisory Committee). In these sessions, the members may address issues relevant to the work of the CEC, for instance, by proposing a “Round Table on Conversation and Trade,”<sup>60</sup> by establishing an ecological vision for “North America 2030: An Environmental Outlook Conference” and by focusing on public concerns in a “Public Workshop on Chapter 11 of the North American Free Trade Agreement (NAFTA)” (id.). The JPAC meetings are open to the public and its comments and its inquiries are usually published (personal participation in the JPAC meeting in October 2006; list of JPAC statements available at CEC 2010: Joint Public Advisory Committee).

Beyond direct thematic involvement with the NAAEC, the “JPAC also acts in its own right as group of experienced and concerned North American citizens to bring issues to Council’s attention” (CEC JPAC, no date). Furthermore, the JPAC can call for public comment on its work and the work of the CEC (for example CEC 2008: JPAC calls for comments on CEC’s proposed 2009 projects, CEC JPAC 2006: 5 f).

The national public representatives support the work of the international CEC. Their activities also foster transparency and public participation in the CEC (as required in NAAEC 1993: Art. 1(h)).

## 6.2.2 The Working Program of the CEC

The CEC develops a five-year Strategic Plan (currently 2005-2010) (CEC 2005a). The work to be accomplished is specified in a three-year operational plan (at the time of research, 2007-2009) (CEC 2007). The CEC itemizes “project activities and key initiatives, and specifies the budget for the Commission” (id.: 5). Furthermore, the CEC creates task-specific strategic plans, for example on trade and environment (for example id.: 2005b). The topics for the work of the Commission and thus the content of the plans must await approval from the Council (NAAEC 1993: Art. 10.1(e)).

### 6.2.2.1 The General Working Program of the CEC

In November 2008, the CEC listed five central programs on its homepage (CEC, no date: Projects + respective links)<sup>61</sup>:

- **Environmental Information**, focusing for instance on “Reporting on the State

<sup>60</sup> During the research stay, the author participated in the public reunion of this JPAC Session (CEC JPAC 2006).

<sup>61</sup> The CEC used to have four programs with different foci: Environment, Economy and Trade, Conservation of Biodiversity, Pollutants and Health, and Law and Policy (CEC, no date: Our Programs and Projects + respective links).

of the North American Environment” and “Mapping North American Environmental Issues,”

- **Biodiversity Conversation**, including, for example, “Conserving Species and Spaces of Common Concern” and “Strategic and Cooperative Action for the Conservation of Biodiversity in North America,”
- **Pollutants and Health**, dealing among other things with “Capacity Building for Pollution Prevention” and “Tracking Pollutant Releases and Transfers in North America,”
- **Environment, Trade and Sustainability**,<sup>62</sup> including for instance the “Ongoing Environmental Assessment of NAFTA” (see Chapter 7.3) and “Trade and Enforcement of Environmental Laws,” and
- **Secretariat Reports**,<sup>63</sup> dealing, for example, with “Green Building” and “Maize and Biodiversity.”

Although the NAAEC mainly focuses on trilateral issues, the working program may pay special attention to individual countries concerning particular topics in order to improve trilateral cooperation. The emissions inventory which was established for Mexico can be regarded as such an example (FitzGerald 2007).

In its work, the CEC may establish specific types of external cooperation or tailor-made agreements with business partners through memorandi of understanding (e.g. CEC 1996: North American industry joining forces with the NAFTA Environment Commission). These relationships are, among other issues, intended to create “electronic environmental technology information services to assist North American companies” (CEC Council Resolution 96-07<sup>64</sup>).

In 2004, ten years after the creation of the NAAEC and the CEC, the three countries also adopted the **Puebla Declaration**. The Declaration reaffirms their commitment to the Commission and outlines three priorities for the next decade of collaboration to protect and enhance the North American environment:

- (I) to improve environmental information to support decision making,
- (II) to build capacity, emphasizing a strengthening of environmental management in Mexico, and
- (III) to work toward a further understanding of trade and environment linkages (CEC 2004b).

The Puebla Declaration “recognize[s] the different capacities of the Parties,” especially

<sup>62</sup> See Chapter 6.2.3 for further details on the projects of this program.

<sup>63</sup> The objective of the Secretariat Reports is explicitly mentioned in the NAAEC as a task of the CEC (NAAEC 1993: Art. 13). The topics of the remaining four programs are less directly mentioned in the NAAEC.

<sup>64</sup> It focuses on the particular aim of presenting ISO 14000 to small and medium-sized companies originating from an alliance between the business companies and the CEC.

of Mexico in contrast to Canada and the US, and enables the CEC to provide support in terms of capacity building. Here, the singling out of Mexico needs to be emphasized as it is a unique official approach within the trinationally equal cooperation to pay explicit attention to Mexico as a single country in order to help identify its possible weaknesses and improve environmental protection in the country.

In the Declaration, the countries do not commit themselves to establishing further activities on the domestic level, neither unilaterally, via individual commitments, nor trilaterally (CEC 2004b).

In 2004, the Ten Year Review and Assessment Committee evaluated the achievements of the NAAEC and especially of the CEC. The report acknowledges, among other things, that the knowledge base concerning environment and trade linkages could be extended, and recommends that the CEC renews its commitment to NAFTA's ongoing environmental assessment. In addition, the Review Committee suggests issues such as water and energy management as possible future working areas (Ten-Year Review and Assessment Committee 2004: X ff, 23, 26, 48 ff).

### 6.2.2.2 Special Tasks of the CEC

The following three tasks play a central role in the dissertation and are therefore described separately. The NAAEC explicitly mentions the Secretariat Reports and the citizen submission procedure in separate NAAEC articles as tasks of the CEC. The CEC Atlas is part of the working program and receives no special mention in the NAAEC.

#### **6.2.2.2.1 Secretariat Report (Article 13 Report)**

The Secretariat Reports are presented in NAAEC's Article 13 – hence the unofficial name “Article 13 Reports.” The Reports analyze environmental issues of trilateral concern, in keeping with the power of the Secretariat to address “any matter within the scope of the annual program” or request from the Council a report on any topic outside of this program (see Chapter 7.2.2.1.5). The Secretariat may also consult external experts concerning the selected topic (NAAEC 1993: Art. 13.1). The Report should include information provided by various sources, for instance by comments from the Joint Public Advisory Committee (id.: Art. 13.2(c)), data that is publically available (id.: Art. 13.2(a)) or information gathered in public consultations (id.: Art. 13.2(e)). The NAAEC does not specify what action the CEC or the countries should take with the results of the reports.

The CEC has published six Secretariat Reports thus far, covering selected issues falling within the working program of the CEC and the scope of the NAAEC. The foci of the Reports have included, among other topics, the “Effects of Transgenic Maize in Mexico” (2004) and “Green Buildings in North America” (2008). These studies analyze these topics and develop recommendations based on the results (CEC, no date: Publications and Documents – Secretariat Reports (Article 13) + links to the two

reports).

Responsibility for the elaboration of the Secretariat Report falls entirely to the CEC. No further suggestions are made in the Report, neither for tasks to be assigned to the nation states nor for strategies for cooperation between the CEC and the nation states. The Council, however, can decide whether to elaborate on and then to publish the report (id.: Art. 13.1, 13.3).

#### **6.2.2.2 Citizen Submissions on Enforcement Matters**

The CEC's tasks surrounding the Citizen Submissions on Enforcement Matters (here here mainly referred to as citizen submission procedures) are intended to give special power to the public as a 'watchdog' to ensure the enforcement of environmental regulations on the domestic level. The procedure "enables the public to play a whistleblower role on matters of environmental law enforcement" (CEC 2010: CEC receives submission on enforcement of Canadian Environmental Assessment Act and Fisheries Act)<sup>65</sup> and is divided into two steps: the submission of enforcement matters (NAAEC 1993: Art. 14) and the Factual Record (id.: Art. 15). The Factual Record can only be further developed in response to a citizen's submission.

Under NAAEC article 14, any non-governmental organization or resident of one of the NAFTA countries may submit a claim describing a possible failure on the part of any of the three signatory countries to effectively enforce its environmental regulations. The submission meets several criteria; it must first of all meet formal criteria<sup>66</sup> (id.: Art. 14.1(a),(f)) and also be able to reference an earlier claim on same topic on the national level, including its governmental response (id.: Art. 14.1(e)).

Following this public submission, the Secretariat may propose to the Council the development of a Factual Record on the basis of the accused party's response to the submission (id.: Art. 15.1). The Record is a neutral description of the situation and is expanded upon under the supervision of the Secretariat (id.: Art. 15, esp. 15.3). The Record gathers the facts of the claim; it neither draws conclusions nor develops recommendations on the issue.

Between January 1994 and November 2008, the CEC received a total of 65 submissions and published 15 factual records (further records were pending) (CEC, no date: Factual Records). The topics addressed by the public cover a broad spectrum and included lack of environmental enforcement with respect to:

- the construction of a harbor terminal in Mexico targeted at tourists, with instructions to prepare and present a general declaration of environmental impact (submission with a published Factual Record) (CEC 1997: Cozumel), e.g.

<sup>65</sup> For further strengths and weaknesses on the procedures of the citizen submission procedure, see inter alia Podhora 2007b.

<sup>66</sup> As formal criteria, the NAAEC (1993: Art. 14.1(a)) requires, for example, that claims be submitted in one of the three languages of the NAFTA countries.

taking into account the General Law of Ecological Equilibrium and Environmental Protection and the Regulation on Environmental Impact Assessment,

- the Canadian Species at Risk Act, under which enforcement of the Act for 197 of 529 species (submission pending) was lacking (CEC 2007: Species at Risk), and
- the Migratory Bird Treaty Act in the US, under which the clause penalizing the killing of migratory birds without a permit was not being adequately enforced (submission with a published Factual Record) (CEC 2003: Migratory Birds).

NAAEC also includes a dispute settlement procedure in case a country continuously violates its environmental laws (see Chapter 6.1.1.). Articles 14 and 15 are also part of this procedure.

As in Article 13 of the Secretariat Reports, the Council – and, therefore, the domestic representatives – plays a key role in the process: The Council may decide on the elaboration of the Factual Record and, in another step, on the publication of the record. Thus the tasks of Articles 14 and 15 are clearly assigned to the CEC, although the public must trigger the process via the submission procedure. Interaction with the nation states does occur, as they are asked to comment on the citizen submission; however, they are not assigned any special task within the process of public participation itself.

The citizen submission procedure is regarded as one of the most outstanding elements of the NAAEC (Expert F, Expert L).

#### **6.2.2.2.3 The CEC Atlas**

Instead of relying on separate national maps based on different data sets and collection systems, the CEC Atlas combines relevant environmental data from all three countries into comprehensive North American maps, thereby providing an extensive source of trilateral information and facilitating a continent-wide perspective and coverage.

Besides basic maps highlighting geographic features and populated places, the atlas also focuses in detail on five themes (May 2009; CEC, no date: Mapping North American Environmental Issues):

- land (maps on elevation and seasonal land cover change),
- water (maps on bathymetry, glaciers and sea ice, hydrography, precipitation and wetlands),
- biodiversity and conservation (maps on marine ecosystems, priority conservation areas such as Baja de Behring and grasslands, protected areas, species of common conservation concern and terrestrial ecoregions),
- population and infrastructure (maps on installed renewable energy, major roads, political boundaries, populated places, population density and railroads), and
- human influence on the environment (maps on anthropogenic biomes, carbon

dioxide flux, commercial marine vessel emissions, human impact on terrestrial ecosystems, industrial pollutants and irrigated areas).

Further maps on land cover and watersheds are planned (id.). The Atlas is interactive and is partly linked with Google Earth in order to facilitate visualization of the relevant data.

The CEC Atlas is not directly mentioned in the NAAEC (NAAEC 1993), but is a recent part of the CEC's working program. The working program assigns the task of the development of the Atlas to the CEC, and the nation states provide data and information for the successful development of the program through their statistical agencies. In this project, the public is a user of the project rather than a contributor to it.

### 6.2.3 Trade: Trade as part of the CEC Working Program

The section "Environment, Trade and Sustainability" is a central aspect of the CEC's working program. In the Puebla Declaration, the countries also confirm the importance of environment and trade as a relevant pillar of the work of the CEC. The homepage of the Commission states:

"In establishing the CEC, Canada, Mexico and the United States acknowledged the growing economic and social links between the NAFTA partners and agreed to promote sustainable development based on cooperation and mutually supportive environmental and economic policies." (CEC, no date: Environment, Trade and Sustainability)

The tasks include the following six projects, which partly include detailed project activities as described on the homepage (CEC, no date: Environment, Trade and Sustainability)<sup>67</sup>:

- a) **Harnessing Market Forces for Sustainability**, focusing among other things on promoting green supply chains and renewable energy (CEC, no date: Harnessing Market Forces for Sustainability),
- b) **Trade and Enforcement of Environmental Laws**, encompassing, for example, trade in illegal goods and the so-called Smart Border Initiative on legal material. There are five components to the project, including building capacity for environmental enforcement and exchanging data on environment and trade components (CEC, no date: Trade and Enforcement of Environmental Laws),
- c) **Ongoing Environmental Assessment of NAFTA** as "a cornerstone of the CEC" by conducting assessments on NAFTA's environmental impact (CEC, no date: Ongoing Environmental Assessment of NAFTA) (see Chapter 7.3),
- d) **Environmental Sustainability and Competitiveness in North America** as, for example, a support for the cooperation between the NAFTA Free Trade Commission and the CEC (CEC, no date: Environmental Sustainability and

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<sup>67</sup> November 5, 2008.



Competitiveness in North America),

- e) **Environmental Management Systems to Promote Compliance and Environmental Performance**, for example, through workshops on the various topics (CEC, no date: Environmental Management Systems to Promote Compliance and Environmental Performance), and
- f) **Sustainable Use and Conservation of Freshwater in North America**, focusing among other issues on water-related technologies and water pricing for sustainable watersheds (CEC, no date: Sustainable Use and Conservation of Freshwater in North America).

Besides these subsections, the CEC also addresses environment and trade linkages in further parts of their program, for example, in the Secretariat Report on “The Effects of Transgenic Maize in Mexico” (Ten-Year Review and Assessment Committee 2004: 72).

The CEC has thereby established a broad spectrum of activities on environment and trade.

## 6.3 The Role of the Nation States in the NAAEC

The NAAEC mainly focuses on trilateral cooperation. By signing the NAAEC, the nation states neither intended to work towards a trinational harmonization of their environmental standards (Expert M), nor did they aim to create a common environmental policy. The following sub-chapters describe the role of the nation states within the context of the NAAEC and the CEC.

### 6.3.1 Governance: The Interaction between the Nation States and the CEC

By creating NAAEC and the CEC, the signatory countries committed to a trinationally equal environmental cooperation. Within NAAEC and the Commission, the NAFTA countries share power, rights and duties equally; for example, they contribute equally to the annual budget and have an equal number of representatives in the JPAC. No country holds a hegemonic position.

The nation states are represented in the CEC through the Council, which consists of the three top governmental environmental leaders of the NAFTA countries. Due to the significant decision-making power of the Council within the CEC, the influence of the nation states on the Commission is strong. This influence becomes especially meaningful when one considers the weak influence the CEC has on the nation states (see Chapter 6.2.1.1). The Council can neither assign tasks to the nation states, nor create tasks or standards that the signatory countries are obligated to implement (NAAEC 1993: Art. 8-16). Any integration of the CEC’s recommendations on the part of the nation states is completely voluntary. This external role of the Commission also becomes obvious, for example, in the recommendations, statements and publications made by the CEC, which usually include the following statement: “The views contained herein [in the publication] do not necessarily reflect the views of the governments of

Canada, Mexico or the United States of America” (CEC 2005c, taken as an example for the quotation). This statement reflects the limited interaction between the CEC and the nation states as well as the weak supra-national powers of the Commission.

The NAAEC briefly suggests to the signatory countries the creation of two additional advisory committees on the domestic level: the National Advisory Committees (NAC) (see Chapter 6.3.4) and the Governmental Committee (also Governmental Advisory Committee, GAC) (see Chapter 6.3.3).

### **6.3.2 Governance: The subnational Levels within the NAAEC – The Governmental Advisory Committee (GAC)**

In the decisions of the nation states, the subnational level may be represented by the Governmental (Advisory) Committees (GAC). The GAC can consist of “federal and state or provincial governments” (id.: Art. 18) and can contribute to the implementation and elaboration of the NAAEC (thereby including trade and environment issues).

The CEC homepage only identifies a Governmental Advisory Committee for the US, whose members “come from state, local, and tribal governments” (CEC, no date: Governmental Advisory Committees). The US advisory committee thus goes beyond NAAEC’s suggestion to only include the state level, by including representatives of local and tribal government as well. A Governmental Advisory Committee is not listed for Canada or for Mexico.

Interaction with the CEC and its work thereby depends on the interaction between the federal level of the signatory country with its sublevels and the willingness of federal officials to include subnational representatives.

### **6.3.3 Trade: The Nation States as Part of the CEC Working Program and Trade Aspects within the Program**

While the Council decides on the working program of the Commission, the environmental representatives of the nation states directly influence the distribution of the annual budget and the content of the working program of the CEC by approving operational and strategic plans. Trade matters form a central part of the CEC’s working program, as reaffirmed through the Puebla Declaration; thus activities involving trade are also approved by the nation states.

As is the case with all of CEC’s work, the influence that the results elaborated upon in the section “Environment, Trade and Sustainability” will have on domestic policy and practice completely is left to the individual countries to decide. In terms of practical domestic implementation, the countries “still pursue their trade and environmental policies largely separately rather than through the CEC” (Ten-Year Review and Assessment Committee 2004: 25).

## **6.4 The Non-governmental Level in the NAAEC**

Public participation is a central element of the NAAEC and therefore also of the CEC

and the domestic level. It can therefore be regarded as an intermediary element, as it crosses the different governmental governance levels. Participation methods may be divided into institutionalized and less institutionalized opportunities. The high level of transparency that the CEC provides is intended to foster public participation.<sup>68</sup>

#### 6.4.1 Governance: Public Participation in the Work of the CEC

The public has various opportunities to participate in and to influence the work of the CEC.

The Joint Public Advisory Committee is an organ of the CEC, representing the voice of the public in the Commission (NAAEC 1993: Art. 16), and can thus be characterized as a formal and rather institutionalized approach to public participation.

Another less institutionalized possibility for public participation, also formally included in the NAAEC, is the opportunity for the public to comment on the work of the Commission, and specifically on the draft of the working program (for example CEC 2008: JPAC calls for comments on CEC's proposed 2009 projects). Furthermore, all relevant meetings are held in public, including the annual Council session (NAAEC 1993: Art. 9.4) and the sessions of the Joint Public Advisory Committee (CEC 2003: Joint Public Advisory Committee (JPAC) Public Meeting on Articles 14 and 15 of the North American Agreement for Environmental Cooperation and Regular Session of the Joint Public Advisory Committee (JPAC) 03-03 including a Plenary Session on the CEC Proposed Program Plan for 2004-2006). North American citizens may request financial assistance for participating, for instance, in the public reunion of the Joint Public Advisory Committee and the Council (*id.*), thus increasing the opportunity for public cooperation with the CEC.

Additionally, the citizen submission procedure empowers the public to effectively control the enforcement of domestic environmental legislation (*id.*: Art. 14, 15). The submission process can be regarded as a formalized participation method. It requires that the public itself act as the trigger to implement the concept, whereas the JPAC and public comments on the work of the CEC are usually triggered by the CEC organs.

In its work, the Commission has constructed cooperation alliances with the business sector through memorandi of understanding that have been reached. This sector can therefore be regarded as an additional optional level, but is not a fixed part of public participation frameworks within the CEC.<sup>69</sup>

<sup>68</sup> Within this dissertation, business companies are not regarded as part of the non-governmental level, because the level rather comprises explicit elements that are explicitly included in the NAAEC.

<sup>69</sup> Further research is necessary to clarify the types and results of cooperation between the business sector, the CEC, and the national level as well as the non-governmental level.

### **6.4.2 Governance: Public Participation on the National Level – The National Advisory Committee (NAC)**

The NAAEC also integrates the public on the domestic level through the National Advisory Committee (NAC). Formed individually within the nation states, the NAC comprises public representatives who assist the nation states in matters concerning the NAAEC and its implementation (NAAEC 1993: Art. 17).

Unlike Canada, the US and Mexico both list a Committee on their homepages (CEC, no date: National Advisory Committees, Government of Canada 2007: Canada's National Advisory Committee on the NAAEC, U.S. Environmental Protection Agency 2009: National Advisory Committee). In both countries, therefore, the public advises environmental representatives concerning trilateral environmental cooperation, thus demonstrating the public's high degree of practical influence in environmental matters.

### **6.4.3 Trade: The Influence of Public Participation on Trade Issues**

As with any subject that is part of the work of the CEC, the public has the opportunity to supervise the work of the Commission on issues of trade. In a rather formal participatory approach, the committees officially created by NAAEC may comment on the work of the JPAC directly to the CEC Council and Secretariat, and to the National Advisory Committee as the domestic organ for domestic governmental representatives.

The public in general may comment on the working plan, may participate in public meetings of the organs of the Commission such as the annual Council meeting and the JPAC meetings, and is thus integrated into discussions of specifically trade-related matters.

## **6.5 Central Challenges and Theoretical Discussion**

The following sub-chapters are divided into three parts. First, general challenges of the NAAEC and the CEC concerning the implementation of objectives that are especially pertinent to the dissertation are presented. Second, the sub-chapter relates the environmental agreement to the approaches of multi-level governance. Third, the interaction between NAAEC and its governance levels concerning the key statement for greening NAFTA is examined.

### **6.5.1 Summarizing Discussion and Challenges of the NAAEC**

NAFTA as a regional trade agreement triggered an evolution of environmental cooperation within the North American hemisphere. The NAAEC is intended to improve the general environmental cooperation between the signatory countries. The NAFTA was the first free trade agreement that created environmental institutions and thereby contributed to the integration of environmental aspects into trade accords on a trilateral level. The literature, however, contains a range of opinion on the advantages and disadvantages of this context for the NAAEC. Mumme (1999: 1), for example,

asserts that the environment might benefit from NAFTA. The negative effects of trade liberalization, he argues, would have increased with or without the existence of an environmental side agreement, so the NAAEC at least may contribute to reducing these negative impacts. Sánchez (1994: 97 f), however, criticizes the poorly defined environmental topics in the agreement and the absence of a time schedule to harmonize domestic standards – both elements are also not addressed in the Puebla Declaration (CEC 2004b) and is thus still valid today – and questions the actual extent of environmental cooperation given these weaknesses. However, the NAAEC was not designed to harmonize the standards and not attempts were made so far to do so (Expert M).

Hufbauer and Schott (2005: 486) strongly criticize the actual targets and effectiveness of the NAAEC, stating that it was “never designed to make substantial progress in addressing [...] environmental problems.” The CEC Secretariat, for example, does not have power over the Council (Expert B) but is the executing level of the NAAEC, whose mandatory influence on the nation states is also low and non-existing, respectively.

In sum, the CEC can be regarded as the price that the countries paid for NAFTA due to the public and political resistance towards the agreement (Expert M), as the green stamp of NAFTA (Expert J), a fact that might explain the political reluctance and the missing support to effectively use the Commission in terms of environmental protection and environmental political cooperation (see Chapter 7.3). The CEC also might be regarded as a trade-off between the countries (Expert G). This reluctance is illustrated in the limited participation of the Council itself in its annual meeting, in which the meeting with the public is taken up by the alternate representatives instead of the Council members themselves. The Security and Prosperity Partnership can be interpreted as another political way to further limit the role of the CEC (Expert M), for instance due to its environmental component concerning transboundary EIA (Expert E, see Chapter 7.2.2.1.5).

Another point of criticism can be seen in the symmetrical structure of the NAAEC and the CEC, which barely takes into account Mexico's standing as an economically less developed country in comparison to Canada and the US (for example Expert M). Mexico's position during the negotiations is also regarded as having been too weak, as the country did not insist on special conditions and parameters that would have made allowance for its disadvantages as a less developed country (less economic strength, possibly weaker environmental laws, possibly weaker enforcement of the existing environmental laws) (Sánchez 1994: 107, Expert M). The Puebla Declaration, however, as a re-commitment to trilateral cooperation through the NAAEC, does partly acknowledge the special status of the country by asserting that capacity building in Mexico is a priority. This is a comparatively unusual step in the NAAEC, which aims for trilateral equality.

Critics (Expert J) also point out that the Commission's results are poorly implemented on the domestic and international level. Lack of political will, for example, is reflected in

the annual budget of the CEC. With its 9 million US\$, the CEC has a small budget compared to the economic power generated through NAFTA (Expert J). Furthermore, further reductions in the financial contribution to the CEC in all three countries (Alanis 2005, Expert M) have been suggested. These examples show that the influence of the CEC on environmental protection and environmental policies in North America is limited (see also Chapter 7.3, Garver, Podhora 2008: 260 f). When one considers that NAFTA has now existed for a decade and a half, the lack of political will and interest in collaborating with the CEC and the acting upon the results of its work becomes particularly obvious (Expert C, Expert J) (see also Chapter 7.2.4, 7.3.4, 7.4.1).

The last aspect of criticism to be mentioned here can be found in the missing support of the Commission, its work and its objectives through NGOs. In the NAAEC, there exists a variety of opportunities to participate in the work of the CEC (e.g. through comments and the citizen submission procedure). This participation methods and the idea of transparency are regarded as one of the central elements of the NAAEC (Expert F, Expert L, Expert M). The NGOs could call the CEC for action even apart from the procedure offered by the NAAEC, however the present interest and participation of NGOs can be regarded as low (Expert J, Expert M). Reasons for this recension of civil society may be found in the usual wave dynamic of participation in international institutions (Expert J), but also in the fact that NGOs rather pay attention to new trade agreements and less to existing ones, thereby leaving aside the opportunities for reconciling trade and environment that the NAAEC provides.

### 6.5.2 Multi-level Governance within the NAAEC

The analysis of the NAAEC and its practical implementation regarding multi-level governance clearly shows that neither institution can be clearly classified as either multi-level governance type I or II. Some parts relate more to type I and other parts to type II, depending on the content of the articles and the individual practical implementation. Classification as semi-type is thus appropriate.

Table 7 demonstrates and describes the connection between the institutions and the governance types and relates to the definitions and extensions to the topics for North American environmental multi-level governance set out in Chapter 2.

Table 7: Relations of multi-level governance to NAAEC and the CEC

(author's compilation, according to NAAEC 1993 and selected references made in Chapter 6 concerning the implementation of the agreement)

NAAEC	Type I	Type II	Semi-type
<b>a) type of jurisdiction</b>	<b><i>general purpose:</i></b> NAAEC has a general environmental mandate with few specifications regarding selected environmental issues.	<b><i>task-specific purpose:</i></b> The NAAEC's practical implementation is directed toward general environmental tasks surrounding certain topics in the work of the CEC.	<b><i>specific tasks following a general purpose:</i></b> The NAAEC provides a general framework that is made more specific via the working program of the CEC.
<b>b) membership</b> - horizontal - vertical - intermediary	<b><i>non-intersecting:</i></b> The NAAEC is non-intersecting horizontally on the national and subnational level with view to the domestic legal frameworks and institutions and the SPP.	<b><i>intersecting:</i></b> The NAAEC requires and then (partly) implements unilateral intersections that are - horizontal on the supra-national level (unilateral from CEC to Free Trade Commission and NAAEC to NAFTA), - vertical from the Governmental Advisory Committee to the nation states (optional) and from the national states to the CEC (both unilateral), - intermediary on the supra-national level (JPAC, mandatory – unilateral to CEC) and on the federal level (National Advisory Committee, optional – unilateral to federal level).	<b><i>semi-intersecting depending on the legal framework and the practical implementation:</i></b> The NAAEC provides a limited (partly unilateral) scope and selected mandates for vertical, horizontal and intermediary intersections that cannot be completely fulfilled in their practical implementation.

<p><b>c) level of jurisdiction</b></p> <ul style="list-style-type: none"> <li>- intergovernmental</li> <li>- national</li> <li>- regional</li> <li>- non-governmental</li> </ul>	<p><b><i>limited number of levels:</i></b></p> <p>A narrow interpretation of the NAAEC produces two mandatory levels, the nation states and the CEC with JPAC as its public subunit.</p>	<p><b><i>unlimited number of levels:</i></b></p> <p>A broad interpretation of the NAAEC provides opportunities for an unlimited number of levels, comprising mandatory and optional levels:</p> <p><i>Mandatory:</i></p> <ul style="list-style-type: none"> <li>- CEC (international level)</li> <li>- nation states (federal level)</li> <li>- JPAC (public level in the CEC: non-governmental/intergovernmental level)</li> </ul> <p><i>Optional:</i></p> <ul style="list-style-type: none"> <li>- Governmental Advisory Committee (subnational/regional level in the nation states)</li> <li>- National Advisory Committee (public level in the nation states)</li> <li>- the public in general/ specifically,</li> <li>- industry groups (through memorandi with the CEC),</li> <li>- an increase of levels is possible (further memorandi, calls for public participation, etc.).</li> </ul>	<p><b><i>officially limited number of levels, integrating an unlimited number of levels in the practical implementation:</i></b></p> <p>The NAAEC provides a wide range of opportunity for different levels of governance that is not completely covered by the formally responsible levels.</p>
<p><b>d) design</b></p> <ul style="list-style-type: none"> <li>- legal</li> <li>- practical</li> </ul>	<p><b><i>system-wide architecture:</i></b></p> <p>NAAEC creates a common structure for trilateral environmental cooperation based on the agreement itself and the responsibilities of the different levels of jurisdiction.</p>	<p><b><i>flexible design:</i></b></p> <p>The various projects, tasks and approaches to cooperation realized under the auspices of the NAAEC via the CEC working program are designed separately and with individual shapes according to regional and thematic foci.</p>	<p><b><i>a fixed background allowing for flexible application:</i></b></p> <p>The NAAEC provides an extensive structure that can be applied through an individual design, which is adapted to the scope and objective of each project or activity of the CEC working program.</p>



### a) Type of jurisdiction

With regard to the NAAEC and its practical implementation, the type of jurisdiction can be described as bifid. The NAAEC as an agreement basically refers to the environmental cooperation between the signatory countries, whereas additional aspects of trilateral cooperation, for example trade liberalization, labor issues and security issues, are addressed through other accords (NAFTA, North American Agreement on Labor Cooperation and Security and Prosperity Partnership are examples). The NAAEC therefore can be regarded as having a general environmental purpose (type I). In the practical application of the NAAEC, however, the CEC specifies the tasks of general environmental cooperation through detailed projects and activities in its working program, a mechanism characteristic of multi-level governance type II.

These mixed characteristics with regard to legal background and practical implementation point to a classification as **semi-type**.

### b) Membership

The horizontal dimension on the supra-national level is designed to be unilaterally intersecting. NAFTA itself does not mention its environmental side agreement, whereas the NAAEC is explicitly designed to “support the environmental goals and objectives of the NAFTA” (NAAEC 1993: Art. 1(d)). As in the case of the legal background, the two Commissions have distinct mandates: The CEC only claims a unilateral mandate to cooperate with its economic counterpart of the Free Trade Commission, but the NAAEC’s mandate for the CEC does not have a counterpart in NAFTA for the Free Trade Commission. The mutual cooperation between the two Commissions is therefore reliant on political will. Only recently were first steps towards this cooperation taken, via the CEC Council meeting in 2007.

These facts indicate a classification as semi-type, due to different types of intersection in terms of legal background and practical application. Basic though unilateral aspects of cooperation (partly type II) have emerged, but have faced challenges in their practical application and thus reveal quite limited intersection (type I). In contrast, the relationship between NAAEC and the Security and Prosperity Partnership is clearly non-intersecting (type I).

With respect to the horizontal federal level, the NAAEC usually only refers to areas and tasks of environmental cooperation, which seldom carry explicit requirements. Cooperation mainly flows through the CEC and less directly among the countries and their legislations and responsible institutions themselves (see Chapter 7.2). Thus it can be seen as a first though lax intersection that rather relates to type I with few references to type II. As there is no difference between the NAAEC requirements and their practical implementation, the semi-type does not apply here.

The subnational level functions mainly as a support for the federal level via the Governmental Advisory Committee in the NAAEC. This level is therefore not intersecting horizontally among the countries. Furthermore, the current strategic plan does not list any tasks for the CEC to foster cooperation on the subnational level (CEC 2005a). The NAAEC background and its practical implementation can therefore be classified as non-intersecting (type I).

The vertical dimension is divided into an upward and a downward intersection, which again can be described as unilateral. The governmental dimension is a unilateral upward intersection, as the

Governmental Advisory Committee of the subnational level – if applied – may influence the federal level that, in turn, governs the CEC through its environmental representatives. There is no binding influence, however, issuing from the subnational level directly upon the CEC, as the Governmental Advisory Committee does not have any binding authority. In contrast, the downward intersection starting with the Commission only provides assistance and recommendations to the federal level without any binding authority, and thereby also ignoring the subnational dimension. Thus the semi-type functions here vice-versa as in the majority of aspects analyzed prior to the vertical dimensions: The NAAEC provides extensive and flexible opportunities, which are not completely applied, however; thus the semi-type again applies here.

The intermediary dimension has the ability to traverse the horizontal as well as vertical level in different forms; however, it can be described as less institutionalized than the horizontal and vertical levels: The Joint Public Advisory Committee is an enduring and institutionalized organ of the CEC, but lacks political influence within the Commission. The domestic National Advisory Committee is an optional committee and thus not implemented by all countries, and public participation opportunities, as well as the citizen submission procedure that the NAAEC provides, are not always taken advantage of by the public as they could and should be. The comparatively weak institutional integration of the public can be regarded, however, as a strength, as it allows the public to attach themselves to any part of the horizontal as well as the vertical dimension and thereby create the intermediary level. Public participation is not applied stringently to all parts of the vertical and horizontal dimension, but may be added separately as an opportunity for extra support.

Though public participation is a fixed part of the NAAEC and even partly institutionalized through the agreement via the Joint Public Advisory and the National Advisory Committees, public comments and recommendations do not have to be formally integrated into the process. The intermediary level is therefore partly intersecting with the vertical and horizontal dimension in the practical implementation. Within this intermediary level itself, selected aspects of public participation are linked; for example, when the JPAC calls for public comments on the CEC working program and holds public meetings. Here, therefore, the relation to type II in the practical implementation, though related to type I in the opportunities the NAAEC generally provides, again form the semi-type.

In sum, the analysis of the NAAEC and its practical implementation shows that the intersection of membership can be characterized mainly as **semi-type** with respect to the horizontal, vertical and intermediary dimensions, whereby selected elements refer to type I and II.

### c) Level of jurisdiction

The NAAEC provides a wide range of opportunity for different levels of governance that is not completely covered by the formally responsible levels. The agreement and its implementation can be interpreted both narrowly and broadly in terms of levels of jurisdiction, whereas both forms have different foci with respect to types I and II.

Adhering to a rather narrow interpretation, the NAAEC basically includes a limited number of levels. The agreement refers to two mandatory levels: the intergovernmental level – the CEC (including JPAC) – and the national federal level. These two levels are formally institutionalized. Very few references are made to the subnational and to the binational and regional level, whose

scopes of authority are not as binding as those of the nation states and the Commission. The limited number of levels is connected to multi-level governance type I.

Allowing for a broader interpretation of the NAAEC and taking into account the practical implementation of the CEC tasks, an almost unlimited number of levels can be identified. This unlimited number proliferates through less institutionalized governance forms. The CEC, for example, continuously includes the public in its work, thereby adhering to different procedures depending on the contents of the respective NAAEC articles and the working program (citizen submission procedure, comments on drafts, participation in meetings etc.). The inclusion of the Joint Public Advisory Committee as an official part of the CEC's structure is an example of effective integration of the public. Though the Committee is part of the CEC structure, the JPAC has no direct influence on the Council and its decisions, and vice versa. Furthermore, the National Advisory Committees represent a voluntary attempt to include the public on the federal level, although, due to its volitional nature, it cannot be considered a fixed part of the levels of jurisdiction. Public participation, as well as the two Committees, can thereby be described as influences of the non-governmental level on the federal as well as on the international jurisdiction, though not as an explicit jurisdiction. Additionally, the Governmental Advisory Committees, as an optional organ, support the federal level and thus the work of the CEC, though they might be more institutionalized due to their inclusion of governmental representatives.<sup>70</sup>

Also highly relevant in this context is the interest of the CEC in cooperating with business associations, for example through memorandi. Though this approach could be applied to all different governmental levels, it is certainly pertinent to the CEC, where an extension either within the business sector or with further cooperation partners is possible, thereby increasing the number of levels. This unlimited number of levels is connected to multi-level governance type II.

Due to the combination of mandatory and optional levels and their individual implementation by the nation states, it is difficult to settle on one type of multi-level governance. Adopting a narrow interpretation with two mandatory levels (type I), the implementation opportunities are partly more extensive due to the options that the CEC has (public participation, memorandi, etc.). This could be interpreted as a regular feature of the semi-type. In contrast, a broader interpretation with three mandatory levels and further optional levels includes the variety of different implementation approaches that the NAAEC provides; however, the different opportunities, influences and powers for the various types of jurisdictional levels that the NAAEC and its implementation entail are not always applied according to the existing opportunities. Here again, the semi-type works vice versa.

In sum, the levels of jurisdiction can be classified as **semi-type**, as this interpretation emphasizes the high number of opportunities and thus the flexibility that the NAAEC provides.

#### **d) Design**

The design of the jurisdiction can be described as semi-flexible. In terms of the legal dimension, the NAAEC creates a mandatory framework for cooperation among the three countries. The

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<sup>70</sup> Further research is needed to identify the influence of the Governmental and National Advisory Committees on the federal level.

Puebla Declaration, though not an amendment to the NAAEC, consolidates the central facets of the CEC's work (type I), but at the same time focuses on three specific elements (type II). The actual implementation of the content of the NAAEC, however, is subject to Council decisions, as its members approve the annual budget and working program. Furthermore, the nation states implement their self-commitments through individual approaches and activities, since the NAAEC outlines basically no requirements. The interpretation of the NAAEC on the practical level thus offers a wide variety of design opportunities and belongs consequently to the **semi-type**.

### **Summary: Multi-level governance semi-type**

The NAAEC and its practical implementation have a distinctive relationship to the three types of multi-level governance. The NAAEC – mainly related to type I – creates the legal background that is then implemented, extending the scope of type I to the flexible interpretation of type II. This mixture is best expressed through a classification as **semi-type**, which creates space for both steps to develop a valuable framework for North American environmental cooperation.

### **6.5.3 Key Statement for Greening NAFTA applied to the NAAEC**

When NAFTA came into force, its supporters viewed it as the greenest free trade agreement ever on account of its environmental side agreement. NAFTA was the origin of the NAAEC, which suggests that NAFTA and NAAEC, and thereby economic and environmental cooperation, are closely entwined. NAFTA recognizes the interrelationship between trade and its environmental impacts. Thereby, the NAAEC can be regarded as groundbreaking (Expert F). NAAEC establishes environmental prevention measures in order to promote sustainable development (as it states in the Preamble). Neither NAAEC nor the environmental content of NAFTA, however, exist in order to solve environmental problems through the trade agreement of NAFTA.

Reconciling trade and environment is a central goal of NAAEC's Article 10.6 on environmental support of the Free Trade Commission, but it is only one of several general environmental issues that the signatory countries agreed upon. The assessment of NAFTA's environmental impacts, which is also part of this article (10.6(d), see Chapter 7.3), is vital to increasing the positive and reducing the negative impacts of the trade agreement. The ten year review of the CEC, the so-called TRAC-report, acknowledges the success of the CEC, noting that it "has increased our collective understanding of the environmental effects of NAFTA, and of trade and economic development more generally, and on occasion has contributed to some positive environmental results" (Ten-Year Review and Assessment Committee 2004: x). The report also emphasizes, however, that the three environmental ministers must "renew their commitment [...] [to] assessing the environmental implications of trade" (id.). The current political and legal setting poses challenges thereby, in that the NAAEC neither mandates political action from the nation states regarding the results of the NAFTA analysis, nor is the CEC required to work with these results (see Chapter 7.3). In addition, the budget of the CEC itself can only be regarded as limited concerning greening NAFTA in general (Expert M).

Similarly, the sustained political influence of the CEC on greening NAFTA is low. Though the CEC is defined as NAFTA watchdog (e.g. Environmental News Service 2008), the missing links between the NAAEC and the CEC and NAFTA complicate this role. Consequently, the

Commission has not successfully fulfilled its duty as a watchdog (Expert M). The mandate of the CEC to work with the Free Trade Commission, for example, is unilateral and has not been fully met in past years (Ten-Year Review and Assessment Committee 2004: 24). In 2007, the alternate representatives of the trade ministers joined the CEC's Council meeting for the first time since NAFTA came into force (Expert C). The absent Secretariat of the Free Trade Commission further impedes direct cooperation between the two institutions, shifting opportunities for environment-trade cooperation to the NAFTA working groups and committees. In their efforts to improve their environmental components, these groups seldom consulted the CEC (Ten-Year Review and Assessment Committee 2004: 24). The disparate mandates and technical supports of the two Commissions also betray a lack of synchronization between NAFTA and NAAEC.

Table 8 illustrates the relationship between NAAEC and its four relevant governance levels (according to the levels of jurisdiction of multi-level governance) and the greening of NAFTA based on the key statement presented in Chapter 2. (The analysis of the NAFTA EA in Chapter 7.4.3 goes into deeper detail concerning the influences of Article 10.6(d) on greening NAFTA).

Table 8: Contributions of the types of governance as part of the NAAEC to greening NAFTA (author's compilation, in reference mainly to NAAEC 1993: Art. 10.6)

<b>Governance level</b>	<b>scientific methodological analysis for identifying NAFTA's impacts</b>	<b>mitigation of negative impacts, increase of positive impacts</b>
<b>NAAEC</b>	Art. 10.6 refers to the ongoing environmental assessment of NAFTA.	There is no reference to increasing the positive and decreasing the negative impacts of NAFTA in Art. 10.6.
<b>CEC</b>	The CEC implements Art. 10.6 and elaborates upon the Analytic Framework as a scientific methodology.	Art. 10.6 does not explicitly refer to increasing the positive and decreasing the negative impacts of NAFTA.
<b>Domestic level</b> (federal/ subnational)	No commitment is made to any methodology concerning the analysis of NAFTA's impacts. Art. 10.6 does not assign any tasks to the domestic level.	No commitment is made to increasing the positive and decreasing the negative impacts of NAFTA. Art. 10.6 does not assign any tasks to the domestic level.
<b>Regional level</b>	n/a	n/a
<b>Non-governmental level</b>	The public participates indirectly in the ongoing environmental assessment of NAFTA.	The JPAC addresses aspects of the trade-environment link. No direct link to the results of the NAFTA EA and the increase of positive and the decrease of negative NAFTA impacts could be identified.

The **NAAEC** itself calls for an ongoing environmental assessment of NAFTA (partly requirement 1a), without, however, defining a methodological approach. The agreement also

does not establish any requirements regarding what should be done with the results of the assessment. Thus the key statement for greening trade is only **partly fulfilled**. The Analytic Framework of the CEC (see Chapter 7.3) is based upon Articles 10.6 and specifically 10.6(d) and thus partly meets criteria 1. The Framework does not comply with criteria 2, since it does not dictate how the results should help green NAFTA by increasing the positive and decreasing the negative impacts.

The **CEC**, as the international and executive level of Article 10.6, developed the Analytic Framework as a central basis for the assessment and thus also the basis for greening NAFTA according to the key statement. Similar to the NAAEC, however, the CEC itself does not necessarily use the results of the NAFTA environmental analysis to increase and decrease positive and negative impacts, respectively.

Though the section “Environment, Trade and Sustainability” is central to the work of the CEC – and was even recently reconfirmed through the Puebla Declaration – the work of the Commission does not necessarily produce a green NAFTA. The projects of this section fulfill the general mandate of the CEC, in that they mainly promote, analyze possible influences and establish recommendations.

Thus the CEC, too, only **partly fulfills** the first part of the key statement. Reasons for this limited fulfillment can be largely attributed to the weak political influence of the Commission on, and the lack of cooperation with, the Free Trade Commission and the domestic level, respectively. Consequently, these entities do not implement the results of the “Environment, Trade and Sustainability” section in a politically binding and thorough way. Concerning the integration of the results, even the ten-year review contained in the report of NAAEC’s Ten Year Review and Assessment Committee recommends greater facilitation and support for “the work of CEC and NAFTA working groups at the interface between trade and environment.” The Report also recommends continuing with the analysis of NAFTA’s environmental impacts as well, so as to create a clearing house mechanism in the internet concerning environment and trade aspects and promote market-based instruments that address environmental concerns (Ten-Year Review and Assessment Committee 2004: xi f). Though the Report does refer to requirement 1a of the key statement on a scientific analysis, it emphasizes that the next steps to be taken beyond pure analysis of trade-environment linkages have not yet been articulated. In sum, these suggestions describe opportunities for the CEC to improve NAFTA environmentally, but do not call for explicit actions or activities based on the results of the NAFTA EA.

Concerning the **domestic level**, the federal and the subfederal levels are not involved in the methodological assessment of NAFTA, neither in Article 10.6 nor in the self-commitments. They are not required, moreover, to work with the results of the analysis, nor is the CEC empowered to create mandatory standards for industries or the nation states. In contrast to the CEC, the domestic level did not explicitly contribute to the development of the Analytic Framework. When the Commission devised the Analytic Framework on behalf of the signatory countries, no domestic Framework for the analysis of further individual assessments followed (despite the fact that Canada and the US presently have their own methodologies for environmental ex-ante assessments of their trade agreements). This level, therefore, does **not fulfill** the key statement, neither requirement 1 nor 2.

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The **regional level** is not involved in the NAAEC with regard to this topic, so the key statement is **not pertinent**. Neither the development of the scientific framework nor the application of the results applies to the regional level, as it does not play an influential role in the NAAEC.

The role and influence of the **non-governmental level** are somewhat ambiguous. On the one hand, Article 10.6 assigns no particular role to this level. On the other hand, public participation is a standard element of the NAAEC, and the public participated in the development of the Analytic Framework and commented on the ongoing NAFTA EA (see Chapter 7.3), a fact that is less significant in respect to the fulfillment of the key statement. These activities, however, basically fulfill requirement 1a on the assessment itself and do not address requirement 2 on actual activities. The non-governmental level therefore does **not fulfill** the key statement.

**In conclusion**, the analysis shows that **only some levels partly fulfill the requirements of the key statement for greening NAFTA**. The ability of the NAAEC and its governance levels to reduce NAFTA's negative environmental impacts and increase its positive impacts can thus be described as **limited**.





## 7 Environmental Assessment as Part of the NAAEC

The NAAEC is an agreement of trilateral environmental cooperation, mainly covering different aspects and ideas of cooperation. It aims to establish a common basis for interaction, for example, by creating the CEC (NAAEC 1993: Art. 8-16) or by regulating how violations of environmental laws are handled domestically (e.g. id.: Art. 5.2, 5.3). Furthermore, NAAEC identifies topics requiring special attention during trilateral cooperation, such as hazardous waste (for instance, id.: Art. 10.5(a)) and pollution prevention (for example, id.: Art. 10.2(b)). In contrast to these concrete ideas of cooperation, the NAAEC does not include specific instruments for trilateral environmental cooperation. It seldom mentions any time schedules or specific objectives that have to be fulfilled either by the CEC or by the signatory countries.

The approaches to environmental assessment in their different forms therefore stand out as extraordinary exceptions. No other environmental instrument is as extensively described in the NAAEC as environmental assessment. The NAAEC refers to environmental assessment, to its importance and to its objectives with respect to:

- **on the domestic level**, domestic environmental assessment in Article 2.1(e) as part of the Obligations,
- **on the transboundary level**, transboundary EIA in Article 10.7 as part of the Council Functions,<sup>71</sup> and
- **on the NAFTA level**, environmental assessment of NAFTA in Article 10.6 as part of the Council Functions.

Figure 13 provides an overview of the three approaches to environmental assessment as part of NAAEC. The figure names the NAAEC article, the corresponding level of either the CEC or the nation state and the interaction of the types with NAFTA.

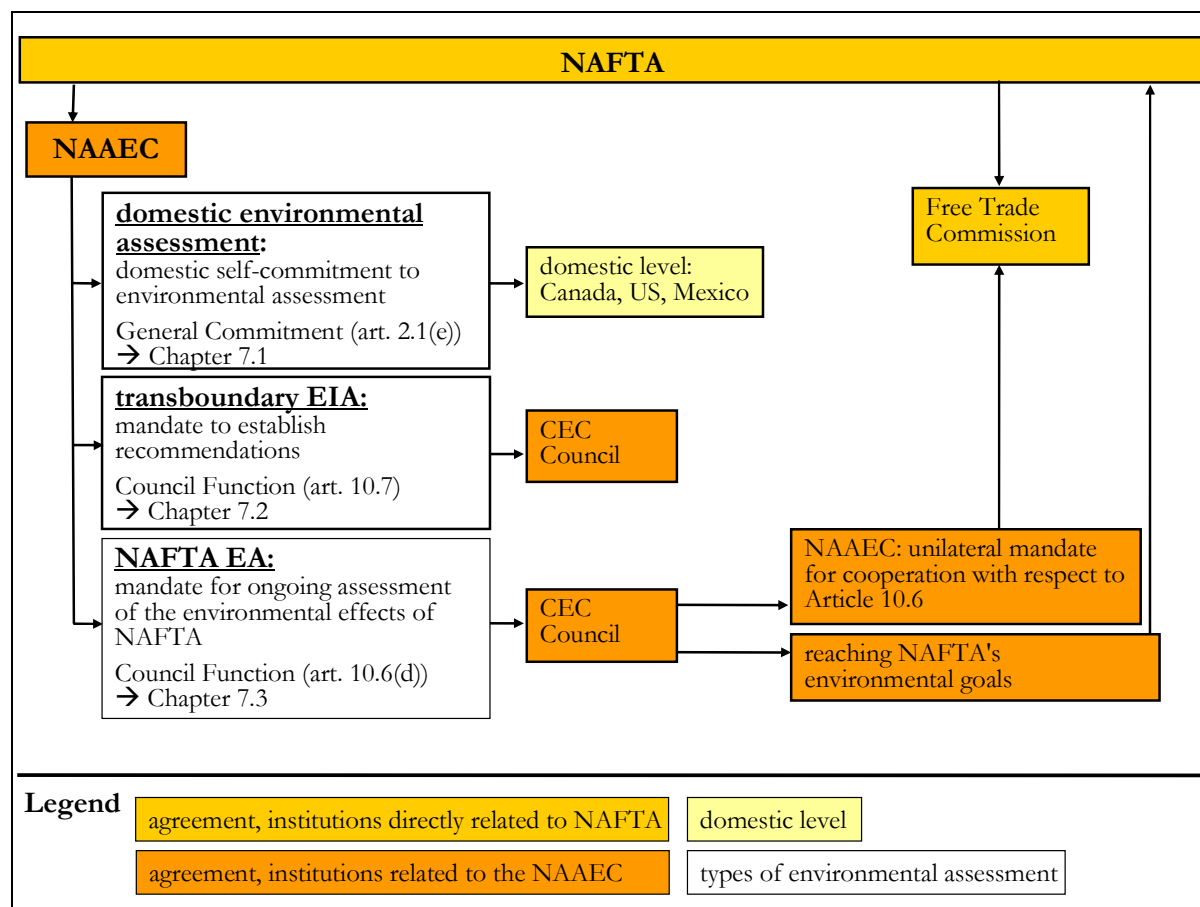
In the following discussion, each form of environmental assessment is presented in a separate sub-chapter. Each sub-chapter describes how these types are included in NAAEC by specifying the responsibilities of the different governance levels – the CEC, the national level and the non-governmental level – as well as time specifications and outlook as well as possible reinforcement in subsequent NAAEC articles. Furthermore, the sub-chapter explains the rationale for integrating the particular form of environmental assessment into the NAAEC and describes the practical implementation of the requirements. Each sub-chapter concludes with a discussion of the challenges facing this type of environmental assessment.

The conclusion of the chapter discusses central differences and similarities among the three environmental assessment procedures, addresses the approaches to multi-level governance within the different types of environmental assessment, and evaluates the influence each separate

<sup>71</sup> In the Council Functions, the NAFTA EA (NAAEC 1993: Art. 10.6) is listed prior to the transboundary EIA (id.: Art. 10.7). Dissertation research did not identify the reason for this order. As the domestic environmental assessment and transboundary EIA are more closely linked than domestic environmental assessment and NAFTA EA, the author changed the order to create a better flow for discussion in this dissertation.

assessment type currently has on greening NAFTA.

Figure 13: The different types of environmental assessment as part of NAAEC  
(author's compilation, according to NAAEC 1993, Art. 2.1(e), 10.6/(d), 10.7)



## 7.1 Environmental Assessment on the Domestic Level

Article 2.1(e) in the trilateral NAAEC refers to domestic environmental assessment.

## 7.2 NAAEC Article 2.1(e): Domestic Environmental Assessment

The NAAEC mentions domestic environmental assessment in Article 2.1(e) in Part II, “Obligations,” and more precisely in the General Commitments (Art. 2) of the signatory countries. The article states as follows: “Each party shall, with respect to its territory: [...] (e) assess, as appropriate, environmental impacts” (NAAEC 1993: Art. 2.1(e), underlined by author).

The article reaffirms the importance of environmental assessment on the national level. Though all three countries have individual domestic regulations on EIA and on SEA, the NAAEC neither refers to these national regulations (for example, to legal requirements and guidelines), nor to a wider interpretation of environmental assessments. Furthermore, no term is used that might hint

at domestic EIA and SEA procedures, for example, terms such as “projects,” “regions” or “policies.” No domestic authority (see Chapter 7.2.1.1) is mentioned either. The actual meaning of the commitment to “assess [...] environmental impacts” cannot, therefore, be deduced from any reference neither to the governmental authority, nor to EIA/SEA terms, nor to the legal requirements.<sup>72</sup>

Despite these missing details, the article will be regarded as stating a commitment to domestic approaches to environmental assessment as they were presented in Chapter 4: domestic project EIA and SEA for policies, plans and programs. Transboundary EIA and NAFTA EA are both mentioned separately in the NAAEC and do not refer explicitly to the domestic level; they will not, therefore, be included in the interpretation of article 2.1(e).

### 7.2.1.1 Assignments to the CEC

Article 2.1(e) mentions no assignments to the CEC. The General Commitments of the NAAEC represent voluntary commitments made by the signatory countries, and do not necessarily aspire to realize the goals stated in the environmental agreement itself. Furthermore, due to its trinational mandate, the CEC does not often work with instruments that are usually developed and applied at the national level.<sup>73</sup>

### 7.2.1.2 Assignments to the Nation States

Article 2.1(e) can be regarded as a voluntary commitment of each of the nation states to environmental assessment. It leaves the responsibility for evaluating environmental effects on the national territory to the respective country; however, the article does not define any specific duties for the signatory countries on the domestic level.

Due to the high level of autonomy that the nation states provide to their subnational levels, this self-commitment basically applies only to the federal level (see Chapter 7.2.4)<sup>74</sup>. The regional level is not explicitly included in the article.

### 7.2.1.3 Projected Timeline and Outlook

Concerning the actual application of the environmental analysis, Article 2.1(e) does not describe a timeline for when impacts (either ex-ante, ex-post, and/ or ongoing) are to be assessed.

<sup>72</sup> Experts interviewed for this dissertation pointed out that, generally speaking, the term “environmental assessment” covers a wide range of possible definitions and cannot necessarily be limited to the domestic instrument of EIA (for example Expert I, Expert L) or SEA. Any activity that evaluates environmental impacts may be considered an environmental assessment; an example is the factual records provided by the CEC under NAAEC 1993, Articles 14 and 15. Within the scope of the dissertation, the main emphasis lies on the interactions among Articles 2.1(e), 10.6 and 10.7, based on the fact that all articles refer to “environmental assessment.” This thesis does not analyze possible linkages among more extensive definitions of environmental assessment. Further research is required to analyze other types of interactions.

<sup>73</sup> Generally, Article 2 (NAAEC 1993) does not assign any tasks to the CEC.

<sup>74</sup> The federal level’s relation to and influence on the subnational levels is not further analyzed in the dissertation. Here, it requires further research to identify this interaction in a NAFTA and NAAEC related context as the ratification of the agreements might have generated different types of interaction between the two governance levels as well as between the agreements and the subnational level.

Generally, the article does not define any future outlook for environmental assessment. The self-commitment therefore either remains in force until NAAEC, particularly Article 2.1(e), are renegotiated, or until NAFTA and therefore NAAEC are annulled.

#### 7.2.1.4 Selected Examples of Interaction in Additional NAAEC Articles and Types of Environmental Assessment

Because of the self-commitment of the signatory countries, the interaction with further articles of the NAAEC can be found in Part II, which refers primarily to the national level.

The General Commitments – NAAEC 1993: Art. 2 – refer to the voluntary pledges made by the signatory countries on the national level. They address, among other things, the commitment to issuing periodic environmental reports (NAAEC 1993: Art. 2.1(a)) and to promoting economic instruments with positive environmental impacts (id.: Art. 2.1(f)).

The General Commitments themselves are part of the “Obligations” of the NAAEC (Part II, Art. 2-7). The Obligations create the framework for trilateral cooperation, addressing common interests such as a high degree of domestic environmental protection (id.: Art. 3) and the enforcement of these protections by domestic governments (id.: Art. 5).<sup>75</sup> Though the Obligations do not directly refer to environmental assessment, they indirectly strengthen the application of the instrument. Environmental assessment may foster a higher level of environmental protection (e.g. as required in Article 3) through its precautionary approach to environmental protection.

Relevant interactions with NAAEC Article 1 describe the central objectives of trilateral cooperation. Among other aims, the countries will comply and enforce their environmental regulations (id.: Art. 1(g)) and promote transparency and public participation (id.: Art. 1(h)). The countries are also responsible for the development, implementation and enforcement of their domestic laws (id.: Art. 3). Even though domestic environmental assessment is not directly mentioned, the article and the examples cited may support the application and development of the instrument on the national level. Public participation is, for instance, an important feature of EIA and SEA in the NAFTA signatory countries (see Chapter 4).<sup>76</sup>

The NAAEC includes further articles referring generally to domestic regulations. Two of these articles are significant with respect to environmental assessment. Articles 14 and 15 allude to the citizen submission procedure, which may also focus on the successful application of the domestic regulations on environmental assessment (see Chapter 6.2.2.2.2). Article 3 does not permit existing domestic environmental regulations to be reduced or eliminated, thereby maintaining at least the regulatory status quo as it was in 1994, also with regard to environmental assessment.

<sup>75</sup> Further examples of the content of the Obligations section: levels of protection, to reinforce a high level of domestic environmental protection through appropriate regulations (Art. 3), publication of domestic environmental regulations (Art. 4), governmental enforcement actions, for example, the use of sanctions in case of violation of environmental regulations (Art. 5.3), private access to remedies (Art. 6), and procedural guarantees (Art. 7).

<sup>76</sup> For interactions with the citizen submission procedure (NAAEC 1993: Art. 14, 15) see Chapters 5.1.3 and 6.2.2.2.2.

Article 2.1(e) mentions neither transboundary EIA nor NAFTA EA, but instead clearly refers to domestic territory and thus removes itself even from transboundary EIA.

### 7.2.1.5 Links with NAFTA

NAAEC Article 2.1(e) names neither links to NAFTA, nor refers to articles that create links to trade liberalization and NAFTA (NAAEC 1993).

## 7.2.2 Practical Implementation of Article 2.1(e)

The governance levels as explicated in Chapter 2 – the CEC as intergovernmental level, and the national federal and subfederal levels, including the regional and non-governmental levels – are endowed with different means to implement Article 2.1(e), as the following sub-chapters describe.

### 7.2.2.1 The Role of the CEC

As a trilateral institution with a mainly trilateral mandate, the CEC lacks any authority over domestic legislation. The countries retain their national sovereignty with respect to their national regulations (Article 3).

To a certain extent, the work of the CEC deals with national aspects of environmental assessment, particularly with regard to the following three issues<sup>77</sup>:

- Citizen Submission on Enforcement Matters<sup>78</sup>: Under NAAEC Articles 14 and 15, the CEC also accepts submissions concerning domestic EIA (see Chapter 6.2.2.2.2.). The submissions testify that all three countries have – to a certain extent – problems achieving flawless application of their domestic regulations on EIA. The citizen submission procedure therefore improves implementation of the national requirements for EIA. The control of the national EIA through the CEC indirectly supports Article 2.1(e).<sup>79</sup>
- North American Environmental Law and Policy Series: This series covers a wide range of topics, including, for example, further descriptions of the citizen submission procedure and its factual records, as well as a general analysis of voluntary measures for environmental enforcement (CEC, no date: North American Environmental Law and Policy Series). In 1999, the CEC published a description of “Environmental Impact Assessment: Law and Practice in North America,” which mainly describes the federal approaches to EIA within the three NAFTA countries and presents examples of subnational responsibilities regarding EIA. The analysis was prepared as part of the CEC’s activities regarding transboundary EIA under

<sup>77</sup> These three aspects cannot be derived from article 2.1(e), as it is a domestic self-commitment and does not include work of the CEC.

<sup>78</sup> The submissions concerning enforcement of the domestic EIA and SEA are not based on Article 2.1(e), but on Articles 14 and 15 of the citizen submission procedure (see Chapter 6.2.2.2.2). It needs to be emphasized, that it would be possible to submit complaints on the failures to enforce domestic EIA and SEA to the CEC even in the absence of Article 2.1(e). Therefore, one may not conclude that any specific interaction between Articles 2.1(e) and 14/15 exists.

<sup>79</sup> The information is based on an analysis of selected abstracts that the CEC provides on its homepage on citizen submissions (CEC, no date: Factual Records; last search January 15, 2009).

the auspices of NAAEC Article 10.7 (CEC 1998: 3)<sup>80</sup> and thus reflects Article 2.1(e) as well as 10.7.

- Summary of Environmental Law in North America: This section is part of the information resource provided to the public on the CEC homepage. It presents domestic environmental regulations and includes information on general environmental laws and policies, public participation, environmental emergencies and environmental impact assessment (CEC, no date: Publications and Information Resources – Summary of Environmental Law in North America).<sup>81</sup> Similar to the Law and Policy publication, this extensive body of information supports the application of domestic and transboundary EIA.

In sum, it should be noted that these CEC tasks generally refer to project EIA rather than to SEA. They also provide opportunities for the Commission to support instruments and approaches on the national level, including domestic environmental assessment. These interventions may indirectly influence activities and regulations on the domestic level, while simultaneously allowing the signatory countries to retain their national sovereignty.

### 7.2.2.2 The Role of the Nation States

The NAAEC clearly defines the role of the national level concerning environmental assessment as an internal domestic procedure. The agreement mainly emphasizes that the countries shall continue to comply with and to improve their domestic approaches (see Chapter 6.1.1). Since NAAEC came into force, Mexico, for example, amended its environmental General Law including the section on environmental impact assessment and the respective Administrative Regulation to the General Law in terms of Environmental Impact Assessment (Ley General del Equilibrio Ecológico y la Protección al Ambiente 1988, main amendment 1996, last 2008, Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental 2000). Canada and the U.S. also reformed, amended, extended and improved their domestic procedures on environmental assessment (for instance, through the establishment of individual department guidelines to apply the instrument, see Chapter 4). Further research is required, however, to identify whether and how these activities and the countries' self-commitments in the NAAEC are linked<sup>82</sup>.

<sup>80</sup> The publication refers to project EIA but not, however, to transboundary EIA and SEA for policies, plans and programs.

<sup>81</sup> Section 7 presents the national EIA. The summary compares the domestic regulations for five sub-items in various degrees of detail and according to their individual scope. The sub-items include: screening or determining when an EIA is required, determining the scope of the EIA process, contents of the EIA document, decision-making and post-decision monitoring, public participation. The section refers only briefly to transboundary EIA in Canada, and does not refer to SEA in any of the three countries.

The CEC homepage states that “the fact that a statute is discussed in the summary does not mean that it is necessarily an ‘environmental law’ within the meaning of NAAEC” (CEC, no date: Publications and Information Resource – Summary of Environmental Law in North America). The inclusion of the EIA into the list, therefore, cannot be cited as a reason for stating that NAAEC’s Article 2.1(e) refers to the EIA on the project level and to SEA.

<sup>82</sup> The dissertation did not analyze the amendments concerning regulations on environmental assessment on the subnational level and possible cooperation initiatives on the regional level.

### 7.2.2.3 The Role of the Non-governmental Level

The non-governmental level plays an indirect role with respect to Article 2.1(e). On the national level, public participation is a regular element of the domestic procedures on environmental assessment (see Chapter 4). Thus the public may influence the application of the instrument, although this potential is not explicitly mentioned in Article 2.1(e).

The public's scope of influence is extended in Articles 14 and 15. By dint of the citizen submission procedure, the public may comment on absent or incomplete implementation of the domestic procedures on environmental assessment in general (not necessarily only concerning public participation during the procedure), an opportunity that has been seized on occasion (see Chapter 6.2.2.2.2).

Furthermore, the JPAC, as a fixed public organ of the CEC, may comment on the work of the Commission. The CEC seldom works with domestic environmental assessment, however, so the advisory role of the JPAC on these issues is also limited.

### 7.2.3 Reasons for Integrating Domestic Environmental Assessment into the NAAEC

The NAAEC reaffirms the Rio Declaration on Environment and Development.<sup>83</sup> Rio's Principle 17 refers to environmental impact assessment and states as follows:

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority (underlined by author).

The reference to "activities" could be interpreted as a reference to environmental analysis not only through project EIA but also through SEAs for policy, plans and programs.

Additionally, in Principle 15 of the Rio Declaration, the countries affirm the application of the precautionary principle, of which the EIA and SEA are part: "The precautionary approach shall be widely applied by States according to their capabilities" (underlined by author).<sup>84</sup>

### 7.2.4 Discussion and Challenges with Respect to the Implementation of Article 2.1(e)

Article 2.1(e) contains a self-commitment of the domestic level to the task of environmental assessment, emphasizing thereby the responsibility of the signatory countries, especially concerning activities within their borders. The CEC does not have any influence on the domestic application of the article. Here, the sovereignty of the signatory countries again intervenes, by clearly separating the commitments of the national level from the tasks assigned by the Commission. Despite this separation, the CEC applies different approaches to reinforce the instrument as part of its working program. In terms of environmental cooperation, however, no

<sup>83</sup> The Declaration of the United Nations Conference on the Human Environment (Stockholm Conference), which the NAAEC Preamble also refers to, does not explicitly refer to domestic environmental assessment (Declaration of the United Nations Conference on the Human Environment 1972).

<sup>84</sup> Further details could not be gathered during the research.

cross-pollination has yet occurred among the environmental assessment procedures of the countries themselves, neither through Article 2.1(e) nor through the tasks of the CEC.

The lack of a definition for what “[to] assess [...] environmental impacts” actually means calls the authority of the article into question. The NAAEC in general rarely provides definitions, and it neither defines the term nor the idea of “environmental assessment.”<sup>85</sup> The following explanation may hint at a definition. Viewing NAAEC’s Article 2.1(e) in light of Rio’s Principles 15 and 17 and thus of NAAEC’s Preamble, it becomes obvious that the article refers to the evaluation of specific activities by the accountable domestic authority. One may conclude, therefore, that the article refers to the national EIA (and even SEA) legislation of the signatory countries.<sup>86</sup>

It should also be emphasized that the transboundary EIA is – if applied – typically a part of the domestic EIA. Contrariwise, Article 2.1(e) explicitly emphasizes the responsibility of each country “with respect to its territory.” The relevance of this Article concerning the transboundary EIA can therefore be regarded as ambiguous: On the one hand, it supports environmental assessment, but on the other hand, it reduces the extent to which countries can be held accountable for their respective territories. This discrepancy will be further discussed in Chapter 7.2.4.

A clearer definition of Article 2.1(e), for example, through the CEC Council, could support the idea of environmental assessment on the domestic, transboundary and trinational levels.

## 7.3 Transboundary Environmental Impact Assessment

Article 10.7 presents the framework for conducting transboundary EIAs and assigns tasks to the CEC as the supporting institution.<sup>87</sup>

### 7.3.1 NAAEC Article 10.7: Transboundary EIA

Article 10.7 is part of the Council’s Functions (NAAEC 1993: Art. 10). It obliges the Council to establish recommendations for the transboundary EIA and states as follows:

Recognizing the significant bilateral nature of many transboundary environmental issues, the Council shall, with a view to agreement between the Parties pursuant to this Article within three years on obligations, consider and develop recommendations with respect to:

<sup>85</sup> No official definition for Article 2.1(e) was identified during the research.

<sup>86</sup> Further research is required to identify the exact linkages between the Rio Declaration and the NAAEC and to determine how the Rio Declaration is relevant for the content of the NAAEC, especially of Art. 2.1(e). The Johannesburg Declaration on Sustainable Development (also known as Rio’s successor Rio +10) neither refers to EIA nor to SEA (UN Department of Economic and Social Affairs 2004: Johannesburg Declaration on Sustainable Development). Therefore, no further inferences can be drawn, especially since the NAAEC makes no explicit reference to the precedents of the Rio Declaration.

<sup>87</sup> Besides her own personal research, the author acknowledges the contributions of a common publication with Geoffrey Garver on transboundary EIA as part of the NAAEC (Garver, Podhora 2008). Expert interviews for the dissertation also provided relevant information for this paper, however they are not directly referred to in this chapter as they are already referred to in the article.



- (a) assessing the environmental impact of proposed projects subject to decisions by a competent government authority and likely to cause significant adverse transboundary effects, including a full evaluation of comments provided by other Parties and persons of other Parties;
- (b) notification, provision of relevant information and consultation between Parties with respect to such projects; and
- (c) mitigation of the potential adverse effects of such projects (NAAEC 1993, Art. 10.7; underlined by author).

The article directly refers to the transboundary EIA, and alludes thereby to projects, but not to policies, programs and plans. The focus is divided between the task for the CEC and the content of the recommendations. Though the article asks for the elaboration of an agreement on transboundary EIA, it provides neither suggestions nor requirements as to its content.

### 7.3.1.1 Assignments to the CEC

As Article 10.7 is part of the Council's Functions, it is directly assigned to the top three environmental representatives of the countries in their function as CEC leaders. The CEC Council is herein named as the institution responsible for developing recommendations on transboundary EIA.

Beyond the establishment of the recommendations, no further tasks are assigned to the CEC. Neither the NAAEC nor the CEC is required to oversee the transboundary EIA agreement. NAAEC does not assign the eventual implementation of the transboundary EIA agreement or any part of it to the CEC.<sup>88</sup>

### 7.3.1.2 Assignments to the National Level

The NAAEC delegates the ratification of a specific agreement on transboundary EIA to the national level ("with a view to agreement between the Parties"), though – in contrast to the recommendations for the CEC – without any stated timelines. In addition, the task of conducting the transboundary EIA is assigned to the domestic level and its "competent [domestic] government authority." However, the article makes few references to the domestic legislations on EIA and transboundary EIA.

In particular, conducting transboundary assessment is clearly a task for the country of origin. The cooperation proceeds mainly via notification of the possibly affected party, provision of information, consultation, and governmental as well as public comments in the country of origin. The possibly affected country neither assesses the particular project according to its individual domestic regulations, nor is there a requirement for the country of origin to integrate selected components of the respective legislation into its domestic procedure for transboundary EIA. There is no obligation, furthermore, to actually integrate the concern of the other party into the final decision or statement of the environmental analysis.

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<sup>88</sup> The work of the CEC with respect to Article 10.7 was not intended to harmonize the national standards on EIA (Expert R).

Besides the individual country, the article also refers to binational elements. NAAEC cites binational responsibility in its emphasis on the “bilateral nature of many transboundary environmental issues,” but suggests no steps that could be taken to foster binational or trinational cooperation of the pertinent governmental institutions. It does not call for further integration of binational or domestic border institutions such as the International Boundary and Water Commission/Comisión Internacional de Límites y Aguas or the Border Environment Cooperation Commission as a partly NAFTA-related institution. Furthermore, it neither highlights the importance and the influence of the subnational level – which also conducts project EIA – nor of the border states and border communities within this context. In addition, no reference to the regional level is made.

NAAEC does not ask the countries to apply the recommendations established by the CEC prior to the implementation of the proposed transboundary EIA agreement. Thus if a country fails to apply these recommendations (even through the citizen submission procedure) it suffers no consequences.

### 7.3.1.3 Timelines and Outlook

The transboundary EIA and the tasks of the CEC are conducted according to timelines. The CEC was required to develop the recommendations “within three years on obligations” (NAAEC 1993: Art. 10.7). The transboundary EIA is thus the only instrument included in the NAAEC for which an explicit timeline exists.

Furthermore, the NAAEC clearly demands an assessment of the transboundary impacts of “proposed projects” (underlined by author) and thus prior to their implementation, referring thereby to ex-ante assessment. It thereby indirectly alludes to the national ex-ante legal framework for conducting EIAs in all signatory countries.

The article also creates the basis for an additional step with respect to transboundary EIA. Beyond the scope of the NAAEC, the article explicitly states that the recommendations should be established “with a view to agreement between the Parties” (underlined by author). Again, this quotation reveals the prominent role of environmental assessment in the NAAEC, as this is the only topic for which the NAAEC calls for a separate agreement. However, the NAAEC does not suggest a timeline for the actual ratification of the agreement.

### 7.3.1.4 Selected Examples of Interaction with further NAAEC Articles and Types of Environmental Assessment

As the NAAEC is mainly focused on trinational environmental cooperation, one may consider the entire agreement the background for transboundary EIA. In addition, further articles indirectly support the implementation and development of the idea of transboundary EIA. It is, for example, reinforced by the following three sub-items, upon which the signatory countries agreed in the Preamble.

First, NAAEC reaffirms the no-harm principle. The Preamble highlights this pledge not to cause environmental damage within the territory of other countries:

**REAFFIRMING** the sovereign right of States to exploit their own resources pursuant to their own environmental and development policies and their responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction (underlined by author) (NAAEC 1993: Preamble).<sup>89</sup>

The transboundary EIA is an important tool for identifying possible impacts on the territory of the neighbor country and thereby helping to mitigate these impacts.

Second, by affirming the Rio Declaration, the countries also acknowledge Rio's Principle 15 and, with it, the application of the precautionary principle, of which environmental assessment and its transboundary component are a part.

Third, the NAAEC Preamble states that environmental media cross borders:

**RECOGNIZING** the interrelationship of their [the signatory countries'] environments (underlined by the author) (NAAEC 1993: Preamble).

Due to the "interrelationship" of environmental media,<sup>90</sup> the dispersion of environmental impacts does not stop at the political border. Environmental effects therefore need to be assessed in their entirety, independently from the political location of the affected area.

Furthermore, the transboundary EIA is reinforced through NAAEC's Article 20.4 in the section on cooperation and provision of information:

Any Party may notify any other Party of, and provide to that Party, any credible information regarding possible violations of its environmental law, specific and sufficient to allow the other Party to inquire into the matter. The notified Party shall take appropriate steps in accordance with its law to so inquire and to respond to the other Party (underlined by the author).

The article clearly refers to the two relevant steps of the transboundary EIA: notification of the possibly affected party and its opportunity to comment on the issue. Proposed activities may indirectly violate procedures on environmental assessment and other environmental regulations, for example, by causing environmental problems that exceed domestic standards.

In addition, Article 20 (NAAEC 1993) supports the idea of transboundary EIA, as it requires the countries to notify any interested party on possible measures and – as indicated above – on interferences with the other party's regulations and to strive to resolve the resultant conflict.

In contrast to these articles supportive of transboundary EIA, the interaction between Articles 2.1(e) and 10.7 is more ambiguous. The self-commitment of the countries strengthens the idea of environmental assessment, also indirectly including transboundary impacts as a possible part of the domestic procedures for environmental assessment. Article 2.1(e), on the other hand, clearly limits the assessment to the respective domestic territory, a limitation which may be regarded as a

<sup>89</sup> The NAAEC Preamble integrates the no-harm-approach of the Rio Declaration by adopting almost identical wording (Rio Declaration on Environment and Development 1992: Principle 2).

<sup>90</sup> See Annex I, layers "Terrestrial Protected Areas" and "Protection of species and areas" for examples of cross-border environmental areas.

move away from the idea of transboundary evaluation and cooperation.

Article 10.7 makes no reference to the NAFTA EA of NAAEC Article 10.6(d).

### 7.3.1.5 Interaction with NAFTA

The transboundary EIA as part of the NAAEC was not designed to interact with NAFTA. It was rather intended to integrate a then-current environmental and political topic into the trilateral agenda (NAAEC 1993: Art. 10.7, Expert E).

### 7.3.2 Practical Implementation of Article 10.7

In the past, the role of the CEC encompassed a wide range of responsibilities with respect to the implementation of NAAEC Article 10.7. In comparison, the roles of the nation states and the non-governmental level are rather small.

#### 7.3.2.1 The Role of the CEC

In the early NAAEC years, the CEC followed its mandate as outlined in Article 10.7. Furthermore, the Commission suggested additional means of implementing the article in its entirety.

##### ***7.3.2.1.1 Establishment of Recommendations on Transboundary EIA***

Until 1997 – as the NAAEC required – the CEC established recommendations with respect to the transboundary EIA agreement. Their objective was to “support the Council in its Article 10(7) obligations” (Garver, Podhora 2008: 256). To establish a basis for these recommendations, the Commission extensively analyzed the existing North American and international regulations and agreements concerning transboundary EIA, investigating, among others, the Espoo Convention of 1991, the “La Paz Agreement” of 1983, ECE Transboundary Accidents of 1992 and the Danube River Convention of 1994 (CEC 2000: 14 ff).

The CEC addressed recommendations concerning four phases of transboundary EIA, including a total of 13 sub-items (id.: 18 ff):

- I. **notification** including
  - (1) trigger for notification,
  - (2) content of the notification,
  - (3) notification logistics,
  - (4) issues regarding the notified jurisdiction/ country, and
  - (5) responsibilities for notifying jurisdiction/ country following a response;
- II. **exchange of information and assessment** including
  - (6) exchange of information,
  - (7) assessment,
  - (8) public participation opportunities,
  - (9) transboundary EIA report, and
  - (10) decision;
- III. **mitigation** including

- (11) definition and application;
- IV. **consultation and dispute resolution** including
  - (12) consultation, and
  - (13) dispute resolutions.

The CEC met its mandate concerning the recommendations in its given time frame, and a trilateral group of experts used these recommendations to draw up a draft of a transboundary EIA agreement (Expert R). Within the context of the task assigned under Article 10.7, the CEC also developed a comparison of the general federal approaches to EIA (CEC 1998).

### ***7.3.2.1.2 Establishment of the Overarching Principles for Transboundary EIA in North America***

In 1995, the CEC Council adopted the following Overarching Principles for Transboundary EIA in North America:

- Pollution does not respect borders,
- Good neighborliness,
- Respect for national and subnational processes,
- Cost effectiveness and efficiency,
- Complementarity, and
- Public participation.

These principles were supposed to guide and inform the future work of the Council with respect to Article 10.7 (CEC Council 1995: CEC Council Resolution 95-7).

### ***7.3.2.1.3 Facilitation of the Negotiations on the Draft Agreement for Transboundary EIA***

Between 1996 and 1999, a trilateral working group comprised of Canadian, US American and Mexican governmental representatives drew up a draft of a transboundary EIA agreement (Garver, Podhora 2008: 257). The working group was separate from the CEC.<sup>91</sup>

The draft agreement mainly concerns topics similar to those addressed in the recommendations: notification, exchange of information and assessment, mitigation, consultations and dispute resolutions.<sup>92</sup> Its Annexes I to IV also provide a list of projects requiring transboundary EIA, details on the content of notification, factors that determine a significant adverse transboundary

<sup>91</sup> Members of the working group, for example, worked for national institutions and not for the CEC at the time of the draft development (informal information, no reference).

<sup>92</sup> Table of Contents of the Draft Agreement: Preamble, (1) Definitions, (2) Trigger for Notification, (3) When to Notify, (4) By Whom and to Whom, (5) How to Notify, (6) Language of Notifications and other Communications, (7) Content of Notification of Proposed Project, (8) Request for, and Exchange of, Information, (9) Response from the Potentially Affected Party, (10) Trigger for Assessment, (11) Conducting the Assessment, (12) Public Participation, (13) Transmission of Assessment Document and Decision Made Thereof, (14) Mitigation, (15) Post-Project Monitoring, (16) Exemption to this Document, (17) Relation to Existing Bilateral Mechanisms/Obligations, (18) On-Going Consultations, (19) Dispute Resolution, (20) General Provisions, Appendix I List of Projects Requiring Notification, Appendix II Content of Notifications, Appendix III Factors for Determining Significant Adverse Transboundary Impacts, Appendix IV, Basic Content of a Transboundary Environmental Impact Assessment.

impact and a description of the basic contents of a transboundary EIA statement.<sup>93</sup> Some parts of the draft, however, require further elaboration (for example, post-project monitoring).

The draft suggests that the following eleven sectors would require notification according to the transboundary EIA agreement (CEC, no date: Publication and Information Resources – Draft North American Agreement on Transboundary Environmental Impact Assessment, Appendix I):

1. Industrial Projects,
2. Mine and Mineral Processing Projects,
3. Energy and Energy Transmission Projects,
4. Water Management, Containment and Diversion Projects,
5. Waste Management, Treatment, Storage and Disposal Projects,
6. Nuclear Related Projects,
7. Oil and Gas Projects,
8. Forestry Projects,
9. Transportation Projects,
10. Tourism and Recreational Projects, and
11. Defense.

The CEC itself was not responsible for developing the draft; however, it “facilitated negotiation of the text” (Garver, Podhora 2008: 257). The CEC served, among other functions, as a gathering point for information and as organizer of the meetings (Expert A). The draft itself specified the future role of the nation states and did not include any tasks for the CEC in terms of transboundary EIA.

Though “the signatories to the NAFTA side accord today [June 30, 1997] agreed to complete a legally binding agreement consistent with their obligations under Article 10(7) of the NAAEC by April 15, 1998” (CEC Council 1997: Final Communiqué), negotiations over the draft agreement broke down (Garver, Podhora 2008: 257, see Chapter 7.2.4).

#### ***7.3.2.1.4 Elimination of the Transboundary EIA Funding from the CEC Working Program and the Budget***

The Operational Plan of the CEC<sup>94</sup> usually referred to transboundary EIA as an ongoing “Specific Obligation under the Agreement”.<sup>95</sup> The instrument was usually funded by the CEC through its working program.

In 2004, while still mentioning it as an obligation, the CEC entirely removed the funding for the

<sup>93</sup> The draft agreement includes the following sub-items: Preamble, definitions (1), notification (Art. 2-7), exchange of information and assessment including Public Participation (Art. 8-13), mitigation and post-monitoring definitions (Art. 14-15), exemptions, references to bilateral obligations (Art. 16-17), consultations and dispute resolutions (Art. 18-19), and Provisions (Art. 20). Articles 14 to 20 were not completely elaborated.

As the draft for the agreement on transboundary EIA was not part of the work of the CEC, it is only briefly presented here. For the full text of the Draft see CEC, no date: Publication and Information Resources - Draft North American Agreement on Transboundary Environmental Impact Assessment.

<sup>94</sup> The information refers to the Operational Plans and the North American Agenda for Action that dictated the working program of the Commission until 2001 (CEC, no date: Publications and Documents).

<sup>95</sup> With the exception of the year 2002.

implementation of Article 10.7 from its budget (CEC 2004a: 48, Garver, Podhora 2008: 257). In the Operational Plans for 2006 and 2007, the topic of TEIA was no longer mentioned (CEC 2006, id. 2007).<sup>96</sup>

#### **7.3.2.1.5 Suggestion for the Elaboration of a Secretariat Report**

In 2005, Canada, the US and Mexico entered into the trinational Security and Prosperity Partnership, an accord completely independent from NAFTA and NAAEC. The SPP also revitalized the stagnating negotiations over the transboundary EIA agreement.<sup>97</sup> Under the SPP, the transboundary EIA agreement was first scheduled for June 2007 (Garver, Podhora 2008: 257, Expert A), then for June 2008 (Expert A) and is currently “delayed” (Government of Canada 2007: Prosperity Priorities).

The Executive Director of the CEC proposed to the Council to establish a Secretariat Report under NAAEC Article 13. The Council voted against the preparation of the report without any further explanation (CEC Council Resolution 05-07).

The CEC’s role as a gathering point of negotiation information and as supporting institution thus came to an end. Under the SPP, the Commission is currently not integrated into the negotiations over the transboundary EIA agreement (Garver, Podhora 2008: 259).

#### **7.3.2.2 The Role of the Nation States**

The role of the nation states concerning Article 10.7 can be divided into two parts. First, the nation states must negotiate and sign the agreement on transboundary EIA, a task that the nation states have been working on for the past decade, taking the draft agreement as a starting point (CEC, no date: Publication and Information Resources – Draft North American Agreement on Transboundary Environmental Impact Assessment).

The second step, the actual application of the agreement, has not been carried out as the countries have thus far not ratified an agreement.

#### **7.3.2.3 The Role of the Non-governmental Level**

The non-governmental level is not included in Article 10.7 and its practical application; however, adhering to their mandate, the JPAC and the general public both commented on the implementation process of the article.

Following its mandate to advise the Council, the JPAC inquired numerous times into whether progress was being made on the transboundary EIA agreement. In 2002, for example, the Committee called for the creation of a new trinational working group to renegotiate an agreement. The JPAC suggested that this group would not only include, as before, a representative of each country, but also a JPAC member, thereby creating an opportunity for the

<sup>96</sup> An Operational Plan for 2005-2007 is not included on the list of Operational Plans (CEC, no date: Publications and Documents – Operational Plans).

<sup>97</sup> There was no official explanation for this institutional shift (Expert M).

public to participate in the negotiations. The Committee also stressed the need to involve representatives of the border states and the subnational level (CEC JPAC 2002). This extended public participation exceeded that called for in the NAAEC in general and in Article 10.7 more specifically.

Besides the JPAC as the official CEC public representative, other non-governmental levels also became active. The Canadian NGO Sierra Legal Defence Fund, for example, also made inquiries into the agreement on transboundary EIA and its pending completion process. It approached the domestic level instead of the CEC, thereby emphasizing the relevant role of the nation states in the CEC's work (Office of the Auditor General of Canada 2006: Canada's Commitment and support for the North American Agreement on Environmental Cooperation).

### 7.3.3 Reasons for Integrating Transboundary EIA into the NAAEC

Political as well as environmental issues supply reasons for integrating transboundary EIA into the NAAEC. Politically, the historical development of North America plays a central role. Prior to the NAAEC, transboundary EIA had been at the heart of several international environmental negotiations. Canada and the US both supported the ideas put forward at the UNECE's Espoo Convention, thereby engaging themselves – to a different extent, however – in an agreement on transboundary EIA (see Chapter 4). First steps toward bringing the EIA into a transboundary context were discussed in higher-level bilateral agreements, which also referred to the instrument as one of their articles/ principles: The 1991 US-Canada Air Quality Agreement (Craik 2007: 12 ff) and US-Mexican “La Paz Agreement” of 1983 are examples of these early initiatives (id.: 18 f). Canada seized its chance to put the topic back on the political agenda during negotiations over the NAAEC (Expert R).

Environmentally speaking, ecosystems do not stop at political borders (Expert I); consequently, transboundary EIA in North America addresses bilateral as well as trilateral environmental issues (Expert A). On the trilateral level, species such as the humpback whale and the monarch butterfly (Expert A, Expert I), are the objects of “trilateral conservation attention and action.”<sup>98</sup> Effects that may impact these species are regarded as a trilateral transboundary impact (Expert A). Binational environmental interactions can be observed in common environmental media such as airsheds, watersheds, aquifers and protected areas (Expert A, Plagiannakos 2000).

Garver and Podhora (2008: 256) summarize the advantages for integrating transboundary EIA into the NAAEC as follows: “The purpose and value of a T[ransboundary]EIA agreement would be to provide notification and information regarding projects with the potential for adverse transboundary environmental impacts, and to assess those impacts and ways to mitigate them, at the early stages of project development, so as (among other things) to reduce the likelihood of major international disputes regarding the projects.” Another reason could be the fact that public doubts have the power to halt the progress of a project, whereas environmental impact assessment may allay public concerns and thus allow the project to conclude within its given timeframe - a fact that is also important in a transboundary context (Expert E, Expert I).

<sup>98</sup> Quotation is referring specifically to the humpback whale (CEC 2005c: 4 f).



In contrast to these environmental and political rationales, Tweedie (2006: 856) directly delineates the NAFTA context in terms of economic development: “Given the choice between domestic economic development and foreign environmental harm, it would be rare indeed for a nation to choose foreign environmental quality over domestic economic growth. These choices and the potential for transboundary environmental harm are of particular concern when the nation causing environmental harm has a free trade agreement with the nation receiving the environmental harm.” Tweedie thereby draws connections among project EIA, transboundary EIA and NAFTA (see Chapter 8.2.1.2); however, transboundary EIA was not included in the NAAEC in order to connect the instrument to NAFTA (Expert E).

In sum, from an environmental as well as a political perspective, transboundary EIA complements trilateral environmental cooperation in North America in general and under the NAAEC specifically.

### 7.3.4 Discussion and Challenges with respect to the Implementation of Article 10.7

In contrast to domestic environmental assessment and the NAFTA EA, transboundary EIA is currently an important political and environmental topic, as the negotiations currently underway within the Security and Prosperity Partnership demonstrate. Furthermore, transboundary EIA is the only environmental instrument for which NAAEC anticipates a trilateral agreement. Transboundary EIA engages different governmental levels through its involvement with the domestic regulations of the signatory countries, challenges the influence of the CEC regarding the Security and Prosperity Partnership, and asks for further international governance.

This sub-chapter presents three central, interconnected challenges: First, the role of the CEC; second, obstacles due to domestic differences regarding a common transboundary EIA agreement; and third, aspects of the current negotiations under the auspices of the Security and Prosperity Partnership.

**First,** a central aspect of the political discussion on the implementation of Article 10.7 on transboundary EIA can be found in the mandate of the CEC and further governmental influences as well as in the scope of the NAAEC. The task for the Commission to establish recommendations is clearly set out, including a timeframe and an agreement as a fixed future objective for the recommendations. In the mid-1990s, the CEC met its mandate in its given timeframe, and its recommendations served as a basis for trilateral negotiations.

Though Article 10.7 neither assigns the development of a transboundary EIA agreement to the NAAEC, nor allocates tasks to the CEC beyond the establishment of the recommendations, experts had expected a conclusion of the transboundary EIA agreement within the NAAEC-CEC context (e.g. Expert E). Statements from the CEC Council and the Canadian Commissioner of Environment and Sustainable Development, however, implied that by establishing recommendations in 1997, the CEC had met its objectives (Office of the Auditor General of Canada 2006: Canada’s Commitment and Support for the North American Agreement on Environmental Cooperation, Garver, Podhora 2008: 257). The CEC is no longer part of the transboundary EIA negotiations, neither as a guiding nor as a supporting institution, and the negotiations under the Security and Prosperity Partnership are completely detached from the

NAAEC. The countries thereby renounced the support the NAAEC and the CEC could provide to the negotiations, thus abandoning a trilateral agreement and institution that they themselves created for prioritizing hemisphere-wide environmental cooperation. The fact that the CEC Council declined to elaborate on this matter in a Secretariat Report on transboundary EIA is telling. Experts who monitored the CEC view these decisions as having significance beyond the actual topic of transboundary EIA, reflecting a larger intent to limit the role of the CEC in the political arena (Garver, Podhora 2008: 258, 260).

**Second**, a central challenge to the complete implementation of Article 10.7 is located on the domestic level. According to the NAAEC, the article neither suggests that selected components of the domestic EIA systems should be harmonized (Expert M), nor can it draw upon a mandate to ask the countries to amend their national legislation to account for transboundary impacts (NAAEC 1993, especially Art. 10.7): “The challenge in working with these building blocks to construct a North American T[ransboundary]EIA agreement has been to create reciprocal obligations among the countries while relying as much as possible on existing domestic processes and mechanisms for conducting environmental assessments” (Garver, Podhora 2008: 256). As Chapter 4 showed, severe differences persist among the NAFTA countries in terms of their domestic legal frameworks and their practical implementation.

A significant obstacle can be found in the different governmental responsibilities of the NAFTA countries. Mexico federalizes the projects that cause transboundary environmental impacts. In Canada and the US, however, even projects with transboundary environmental impacts may not be subject to a federal EIA (depending on the type of permission the project requires). The subnational level would therefore not necessarily be forced to follow the transboundary EIA agreement signed by the federation, resulting in an unequal quantity of assessed projects (Garver, Podhora 2008: 258, Craik 2007: 4 ff, 22): “This conflict seems to be especially important between the USA and Mexico since the countries adjoin directly and their national EIA procedures differ more than the US and Canadian systems” (Garver, Podhora 2008: 258).<sup>99</sup>

This lack of reciprocity calls the balance of the possible transboundary EIA agreement into question in two ways. On the one side it seems to be equivocal, if Mexico as the economically less powerful country has to submit a higher quantity of projects to conducting transboundary EIA. On the other side, one might question the trilaterally equal approach of the NAAEC if its mandate gives birth to an agreement that lacks the trilateral equality that the NAAEC requires.<sup>100</sup>

**Third**, in the past decade, perhaps due to the absence of a timeline in the conclusion of the agreement, “progress toward resuming negotiation of a T[ransboundary]EIA agreement has been slow” (Garver, Podhora 2008: 257). The SPP is “seen as having the potential to give an impetus to any political issue of national, binational and trilateral importance. Those topics usually have been on the political agenda, but have not been implemented so far. The SPP can be seen as giving new life to the stagnating TEIA negotiations”. However, the partnership, too, obviously encounters difficulties in finding a solution that is amenable to all three countries, and “[i]t seems

<sup>99</sup> For further details on conflicts see Garver, Podhora 2008.

<sup>100</sup> Further research is required to determine whether a transboundary EIA agreement elaborated under the SPP would still require trilateral equality as it is defined in the NAAEC agreement.

quite clear that the political shift in responsibility did not help to solve the problems the countries have with finalizing a transboundary environmental impact assessment agreement” (id.: 258).

The continuous deferral of the transboundary EIA agreement leads one to question whether the political will to conclude the agreement is actually there. Despite these challenges to the complete implementation of Article 10.7 and disparate views on the role of the CEC, the ongoing negotiations around transboundary EIA also indicate that environmental assessment plays a vital role both within the NAAEC and within the North American environmental debate. Here, similar to the lack of support given by NGOs to the NAAEC and the work of the CEC, Expert R pointed out that the transboundary EIA was not very much supported by the public, a fact that might contribute to the slow process of the negotiations.

In addition to these political challenges, the general development of environmental assessment in a transboundary context should be addressed here. The CEC only had a mandate to focus on transboundary EIA, not on the SEA (Expert R). However, the fact that initial international approaches to SEA in a transboundary context have been developed is a possible positive sign for future trilateral cooperation. Nonetheless, the currently different foci of the domestic SEA will pose even more substantial negotiation challenges than those related to transboundary EIA, since, in addition to already existing problems, the convergency of SEA foci would be required.

## 7.4 The Environmental Assessment of NAFTA

Article 10.6(d) describes the assignments for the CEC with respect to the environmental assessment of NAFTA (NAFTA EA).

### 7.4.1 NAAEC Article 10.6(d): NAFTA EA

The Commission derives its mandate for the ongoing environmental analysis of NAFTA from NAAEC’s Articles 10.6 and 10.6(d).

6. The Council shall cooperate with the NAFTA Free Trade Commission to achieve the environmental goals and objectives of the NAFTA by: [...]

(d) considering on an ongoing basis the environmental effects of the NAFTA (underlined by author).

Article 10.6(d) establishes a clear mandate for the CEC to continuously conduct frequent ex-post environmental assessments of NAFTA as a trade agreement.

#### 7.4.1.1 Assignments to the CEC

The NAFTA countries gave the CEC “an explicit mandate to monitor the effect of trade liberalization on the North American environment” (Carpentier 2006: 259). Furthermore, Article 10.6 mandates the Council to cooperate with the NAFTA Free Trade Commission.

NAAEC, however, does not specify how the CEC should actually implement these tasks, as it did for transboundary EIA. It does not mention any of the activities that the CEC actually realized under the auspices of the article (see Chapter 7.3.2).

### 7.4.1.2 Assignment to the Nation States

There are no tasks assigned to the nation states, on the subnational or the regional level – all responsibility lies with the CEC.

### 7.4.1.3 Timelines and Outlook

NAAEC explicitly asks for an “ongoing” and, therefore, for a so-called “ex-post” assessment of NAFTA in a continuous manner. It neither defines the quantity of the studies nor a timeline for their submission. Furthermore, it neither proposes nor requires any suggestions about what should be done with the results of the analysis.

### 7.4.1.4 Selected Examples of Interaction with additional NAAEC Articles and Types of Environmental Assessment

In a wider context, Article 10.6(d) is backed by the NAAEC Preamble, which reconfirms “the importance of the environmental goals and objectives of the NAFTA, including enhanced levels of environmental protection.” The Preamble clearly states how NAFTA and Article 10.6(d) should interact, by emphasizing the linkages between the trade agreement and the environment.

Narrowly defined, the environmental assessment of NAFTA is part of the Council’s Functions. Article 10.6(d) is part of the Council’s contribution to achieving NAFTA’s environmental goals. The NAFTA EA is therefore embedded in further tasks that focus on NAAEC’s interaction with NAFTA, for example, its role in assisting the Free Trade Commission.

Articles 10.6 and 10.6(d) refer neither to transboundary EIA nor to domestic environmental assessment.

### 7.4.1.5 Interaction with NAFTA

NAAEC creates a unilateral connection from the NAFTA EA to NAFTA. The instrument is intended to support NAFTA in reaching its environmental objectives; however, no mandate exists for NAFTA or the NAFTA Free Trade Commission to work with the results of the NAFTA EA, and the CEC is not required to integrate the results into its working program, for example in its section “Environment, Trade and Sustainability.”

## 7.4.2 Practical Implementation of Article 10.6(d)

The practical implementation of the article encompasses a variety of activities mainly realized under the auspices of the CEC. The NAAEC thus clearly generates a wide spectrum of opportunities for the implementation of the NAFTA EA.

### 7.4.2.1 The Role of the CEC

Unlike domestic environmental assessment and transboundary EIA, which are not presently part of the CEC’s working program, the ex-post environmental assessment of NAFTA is embedded in the Commission’s “Environment, Trade and Sustainability” section. Three central elements of the CEC’s work with respect to the NAFTA EA are presented below: The Analytic Framework

for Assessing the Environmental Effects of the North American Free Trade Agreement, which provides a methodological frame for the assessments, the general scope of the studies of the NAFTA EA and the general scope of the public symposia. Selected results and further references of the NAFTA EA are presented in Chapter 8.

#### ***7.4.2.1.1 The Analytic Framework for Assessing the Environmental Effects of the North American Free Trade Agreement (Analytic Framework)***

At the time NAFTA came into force, experience with assessing the environmental impacts of trade agreements was quite scanty (Vaughan 2000: 57). In the first few years, the CEC mainly focused on the development of possible strategies for its analysis (Expert J, Expert C). The Commission enhanced the then-existing OECD's framework for environmental and trade reviews of the North American region, for example, by including the Commission as a supporting institution in the Analytic Framework (CEC 1999a: iii).

In 1999, the CEC published the Analytic Framework for Assessing the Environmental Effects of the North American Free Trade Agreement (Vaughan 2000: 57). It was created through a "unique" scientific procedure that was "transparent" and "participatory" (Carpentier 2006: 260) and is still considered to be quite comprehensive (Expert N). Trilateral interdisciplinary expert groups and workshops assisted the CEC in its work (CEC 1999a: iii f), which was based on the six fundamental questions presented in the following box (id.: vii, 3 ff).

Box 3: Preliminary Hypotheses of the Analytic Framework

(id.: vii)

##### ***"Six preliminary hypotheses to focus the analysis [of the NAFTA EA]"***

1. Does NAFTA reinforce existing patterns of comparative advantage and specialization to the benefit of efficiency?
2. Does NAFTA trade liberalization lead to a regulatory/migratory 'race-to-the-bottom'?
3. Does NAFTA give rise to competitive pressures for capital and technological modernization?
4. Do liberalized rules under NAFTA serve to increase the use of environmentally friendly products?
5. Does NAFTA lead to upward convergence of environmental practice and regulation through activities of the private sector?
6. Does NAFTA lead to upward convergence of environmental practice and regulation through activities of the various levels of government, and if so, how?"

These hypotheses incorporate relevant changes that occurred or could occur due to NAFTA itself – for example, changes in domestic regulations and liberalization rules – but also possible changes that the NAFTA did or could provoke, such as the convergence of environmental practices. The Analytic Framework also considers possible negative as well as positive developments, for example, a race-to-the-bottom that could occur in lieu of an increase in environmentally friendly products. Thus the Framework takes into account public concerns in its inclusion of "highly polarized positions" (Carpentier 2006: 260).

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Methodologically, the Analytic Framework refers to three main elements – NAFTA connection of sectors and issues, linkages to the environment, and environmental impacts and indicators. In studies of the NAFTA EA, each sector and issue should be assessed with respect to its environmental, economic, social and geographic context in NAFTA (CEC 1999a). Special aspects of the Analytic Framework include trade-related investment and various institutions entwined with NAFTA (for instance, working groups that influence the environmental content of NAFTA) (Carpentier 2006: 260). Additionally to the economic alterations caused by NAFTA, legal and institutional changes – vital for the implementation of NAFTA – could cause low economic yet high environmental impacts and thus should be taken into account in the analysis (Expert N).

Concerning the purely environmental component, the Framework comprises impacts on air, water, land, and biota (flora, fauna and human population), as well as aggregate indicators, taking into account special issues and indicators for the respective environmental media (CEC 1999a). The Framework should be “applied at the sectoral level and in a linear or sequential manner” (Vaughan 2000: 57), including direct and indirect impacts on the environment (CEC 1999a: 27).

Table 9 summarizes these central elements of the Analytic Framework and their respective analytic references.

Table 9 (Part I-III): General content of the Analytic Framework for Assessing the Environmental Effects of the North American Free Trade Agreement  
(CEC 1999a)

Table 9 (Part I): General content of the Analytic Framework for Assessing the Environmental Effects of the North American Free Trade Agreement

<b>NAFTA Connection of sectors and issues</b>	<b>Analytic Reference</b>
NAFTA Rule Changes	<ul style="list-style-type: none"> <li>- Tariff reductions and other border measures</li> <li>- Changes affecting goods/services once imported</li> <li>- Inputs</li> <li>- Substitute products</li> <li>- Norms for particular processes</li> <li>- Preambulary principles and stated objectives</li> <li>- National implementing legislation</li> <li>- Accelerated tariff reduction</li> </ul>
NAFTA's Institutions	<ul style="list-style-type: none"> <li>- Meeting mandatory responsibilities</li> <li>- Acting upon discretionary environmental mandates</li> <li>- Extending to other relevant subjects</li> <li>- Generating new institutions</li> <li>- Fostering communication</li> <li>- Building capacity</li> <li>- Discouraging unilateral action</li> <li>- Fostering high levels of environmental convergence</li> <li>- Participating multilaterally</li> <li>- Contributing to community building and identity</li> </ul>
Trade Flows	<ul style="list-style-type: none"> <li>- Value and volume of exports/imports</li> <li>- Market share</li> <li>- Structure and composition</li> <li>- Creation and diversion</li> </ul>
Transborder Investment Flows	<ul style="list-style-type: none"> <li>- Regional concentration of investment</li> <li>- Sectoral investment shifts, migration and subsidies</li> <li>- Technology transfer and diffusion</li> <li>- Intracorporate production and standards integration</li> <li>- Corporate concentration</li> <li>- Foreign portfolio investment</li> </ul>
Other Economic Conditioning Forces	<ul style="list-style-type: none"> <li>- Domestic macroeconomic forces</li> <li>- Microeconomic changes in each economy</li> <li>- Major fluctuations from international forces</li> <li>- Changes in weather and climate</li> </ul>

Table 9 (Part II): General content of the Analytic Framework for Assessing the Environmental Effects of the North American Free Trade Agreement

Linkages to Environment	Analytic Reference
Production, Management and Technology	<ul style="list-style-type: none"> <li>- Inputs</li> <li>- Production efficiency</li> <li>- Physical technology</li> <li>- Management standards</li> <li>- Product characteristics and prices</li> <li>- Sectoral and geographic concentration</li> </ul>
Physical Infrastructure	<ul style="list-style-type: none"> <li>- Existing infrastructure capacity</li> <li>- Correlation of capacity</li> <li>- Choke points</li> <li>- Competitive corridors</li> <li>- Transportation/transmission scale</li> <li>- Intermodal shifts</li> <li>- Distancing effects</li> </ul>
Social Organization	<ul style="list-style-type: none"> <li>- Public groups</li> <li>- Property rights</li> <li>- Culture</li> <li>- Migration and community formation</li> <li>- Transnational coalitions</li> </ul>
Government Policy	<ul style="list-style-type: none"> <li>- Governmental intervention in the market</li> <li>- Jurisdiction over environmental policy</li> <li>- Balance between government branches</li> <li>- Strength of market-oriented government policies</li> <li>- Effects of specific government policies on the environment               <ul style="list-style-type: none"> <li>- Procurement practices</li> <li>- Environmental management systems in state-owned enterprises</li> <li>- Financial instruments</li> <li>- Government research and development</li> <li>- Regulations, environmental assessment, intellectual property rights</li> <li>- Environmental regulation of producers and products</li> <li>- Conservation programs</li> </ul> </li> <li>- Environmental surveillance and enforcement</li> <li>- Trilateral cooperation at various governmental levels outside NAFTA institutions</li> </ul>



Table 9 (Part III): General content of the Analytic Framework for Assessing the Environmental Effects of the North American Free Trade Agreement

Environmental Impacts and Indicators	Analytic Reference
Air	<ul style="list-style-type: none"> <li>- Acid precipitation (SO<sub>x</sub>)</li> <li>- Ozone concentration (O<sub>3</sub>, NO<sub>x</sub>, VOCs)</li> <li>- Particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, Hg, Pb)</li> <li>- Persistent organic pollutants (POPs)</li> <li>- Carbon monoxide (CO)</li> <li>- Carbon dioxide (CO<sub>2</sub>)</li> </ul>
Water	<ul style="list-style-type: none"> <li>- Quality of drinking water</li> <li>- Freshwater use (by source/sector)</li> <li>- Lead concentration</li> <li>- Copper concentration</li> <li>- Surface water pollutants</li> <li>- Fish capture</li> <li>- Sewage treatment connection rates</li> </ul>
Land	<ul style="list-style-type: none"> <li>- Intensity of pesticide use for agriculture</li> <li>- Nitrogen from fertilizers and livestock</li> <li>- Area of forested land</li> <li>- Intensity of forest use</li> <li>- Waste generation</li> <li>- Recycling rate</li> </ul>
Biota	<ul style="list-style-type: none"> <li>- Number of threatened/extinct species</li> <li>- Wetlands</li> <li>- Protected areas</li> </ul>
Aggregate indicators	<ul style="list-style-type: none"> <li>- Climate change</li> <li>- Ozone depletion</li> <li>- Acidification</li> <li>- Eutrophication</li> <li>- Cost of environmental remediation</li> <li>- “Ecological footprint”</li> <li>- Energy intensity</li> <li>- Human health costs of environmental pollution</li> <li>- Energy mix</li> <li>- Biological integrity</li> </ul>

The Analytic Framework makes few explicit references to environmental assessment (CEC 1999a: 17, 66, 76). The Framework thereby regards it as one of the “potentially powerful instruments to improve environmental quality” (id.: 17). Furthermore, environmental assessment is explicitly mentioned in relation to physical infrastructure and governmental policies. The Framework thereby directly refers to the application of the instrument concerning energy plants (id.: 17, 66, 76). The Framework, however, neither defines the instrument of environmental assessment (domestic and transboundary project EIA, SEA for policies, plans and programs, others), nor establishes a connection between the methodology of the NAFTA EA and the domestic environmental assessment. Thus environmental assessment is not regarded as supporting tool for the NAFTA EA.

#### **7.4.2.1.2 The Studies of the NAFTA EA**

The CEC conducts the ongoing environmental assessment by supervising specific case studies. Currently there neither exist a specifically adapted framework nor certain indicators for conducting an assessment of NAFTA embracing all sectors and environmental effects of the trade agreement (Expert J).

In 1999, the CEC selected three case studies from two pilot sectors for testing purposes of the Framework (CEC 1999b). The Commission assessed the energy sector throughout the entire North American region. In addition, it specified on the national particularities in agriculture: In Canada and the US, the CEC evaluated the impacts of cattle feedlots, whereas the Commission decided to test maize in Mexico (id., Expert C).

Since the end of the 1990ies, the Analytic Framework is applied to different case studies. Based on the Analytic Framework, experts “analyze major environmental changes under NAFTA taking place within North America” (CEC 1999b: 5). Between 1999 and 2008, the Secretariat presented more than 49 detailed case studies analyzing the environmental impacts of this free trade agreement (CEC 1999a: iii, id. 1999b, id. 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05)<sup>101</sup>. The CEC usually does not conduct any assessments by itself, but partly commissions certain case studies to academia and NGOs and also business companies (Expert C, for example Sierra Club of Canada 2000: NAFTA Effects on Water: Testing for NAFTA Effects in the Great Lakes Basin, Podhora 2009b: 7) and publishes a public calls for papers (for example CEC, no date: Trade and Environment in North America 08).

In general, central sectors that are addressed in the studies are agriculture, energy and industrial pollution. The following box 4 states the rationale that the CEC applies for selecting the sectors that should be assessed.

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<sup>101</sup> Carpentier (2006: 259) refers to more than 50 studies.

#### Box 4: Rationale for selecting Sectors for the NAFTA EA

(CEC 1999a: 28, 1999b: 49)

- “1. The sector must relate directly to major environmental media and natural resources.
2. The sector has been the subject of changes in the economic rules set by NAFTA.
3. The sector has experienced changes in trade during the post-NAFTA period.
4. The sector has involved new direct foreign investment among NAFTA parties since 1994.
5. The sector is one where one might expect, *a priori*, that there would be important effects attributable to NAFTA”.

In particular, the studies cover a wide range of topics, for example natural resources as water (for example Sierra Club of Canada 2000: Assessing NAFTA Effects on Water), policy implications (for example Gaines 2006: Environmental Policy Implications of Investor-State Arbitration Under NAFTA Chapter 11) and environmental services (for example Balarezo Vásquez, Ramírez López 2008: Growth in the Supply of Municipal Environmental Services to Communities on Mexico's Northern Border (1995–2005)). Besides the pure environmental focus, some studies extended the scope of their environmental assessment and address social and sustainability issues, for example “Americas Sustainability Issues: Biodiversity, Indigenous Knowledge and Intellectual Property Rights” (Bastida Muñoz 2003). The following list states the topic-related sectoral scope of the NAFTA EA taking the studies with explicit references to the energy sector as example (CEC 1999b, id. 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05):

- Electricity in North America (CEC 1999b),
- Will Free Trade in Electricity between Canada and the US Improve Environmental Quality (Plagiannakos 2000),
- Open Trade with the US without Compromising Canada's Ability to Comply with its Kyoto Target (Zhang 2003),
- Energy Use in the Cement Industry in North America: Emissions, Waste Generation and Pollution Control, 1990-2001 (Jacott et al. 2003),
- The Conflicting Economic and Environmental Logics of North American Governance: NAFTA, Energy Subsidies, and the Environment (Roff et al. 2003),
- The Effect of NAFTA on Energy and Environmental Efficiency in Mexico (Stern 2005),
- Opportunities and Barriers for Renewable Energy in NAFTA (Howse, van Bork 2006).

The summary of the examples illustrate the wide scope that the studies may cover just within one sector. Thereby, they also analyze various current aspects as the relation to the Kyoto Protocol as well as individual domestic influences as subsidies. Furthermore, the studies cover a different time frame throughout the ex-post analysis in their assessment (partly starting even before

NAFTA entered into force). Though the energy sector was analyzed broadly in the testing phase, the topics of then following studies were not an explicit result of the results of the first study as the titles and scopes illustrate.

The individual NAFTA EA case studies differ in as much as they treat trilateral, binational, transboundary, national, regional and local topics and impacts, as illustrated in the following list (CEC 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05):

- Trilateral: NAFTA Environmental Impacts on North American Fisheries (Chomo, Ferrantino 2000),
- Binational: Local Environmental Protection and Trade: The Cases of Hog Production in Canada and Mexico (Cloutier et al. 2003),
- Transboundary: Will Free Trade in Electricity between Canada and the US Improve Environmental Quality (Plagiannakos 2000),
- Domestic: Mexico's Manufacturing Exports and Environment under NAFTA (Schatan 2000),
- Regional: The Forestry Industry in the State of Chihuahua: Economic, Ecological and Social Impacts post-NAFTA (Guerrero et al. 2000)
- Local: Learning Processes in the Maquiladora Export Industry and Environmental Technologies in Three Northern Border Cities in Mexico: Tijuana, Mexicali, and Ciudad Juárez (Barajas et al. 2005).

The studies thereby show that the scopes of the studies partly overlap in the levels they refer to. The analysis may cover several aspects within one study, for example the domestic, regional and transboundary level at a time. Regional aspects may also address local aspects, as the case of the analysis of the forestry sector in the Mexican region of Chihuahua shows (see Chapter 8).

With regard to the emphasis on a country, the general scope of the studies clearly shows that Mexico, partly with the maquiladora industry, has become the center of attention (CEC 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05, analysis of titles and abstracts<sup>102</sup>). Therefore the studies focus on the environmental effects in exactly that country, which was expected to turn into a pollution haven. A regional focus lies on the US-Mexican border region, which also had been an area of special environmental concern during the NAFTA negotiations.

Generally speaking several case studies explicitly take up some of the concerns raised during the NAFTA negotiations, inter alia by focussing on the question of the existence of a race to the bottom in domestic environmental policies (Fredriksson, Millimet 2000: Is There a Race to the Bottom in Environmental Policies?). In the case of the above mentioned pilot study on the tariff

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<sup>102</sup> For all abstract analyses: In case the abstract was missing, the introduction was analysed.

reduction of maize imports into Mexico, for example the CEC took up “one of the most controversial and important issues in the NAFTA debate” (Kelly, Reed 2003: 105).

Although the studies mainly follow the Analytic Framework, they are not obliged to do so. The studies do not have to follow a fix structure (for example with mandatory maps, recommendations for the CEC and the sectors and regions that were assessed), but the structure is individually created in relation to the content of the respective study.

The CEC does not present final conclusions of the NAFTA EA, neither for the individual case studies, nor for specific sectors and regions, nor for the NAFTA as a complete agreement. Thus the results of the studies are not necessarily connected to each other, for instance when several studies are part of the same sector, as the examples from the energy sector show<sup>103</sup>. The example of the energy sector shows that there is neither a regional nor a detailed thematic obvious interaction between the individual studies.

#### **7.4.2.1.3 The Public Symposia**

Since 2000, the CEC organized four approximately biennial symposia where researchers presented the results of their sectoral evaluation (Carpentier 2006: 261). These meetings had the following themes (CEC, no date: Trade and Environment in North America 08 + links, Expert C):

- 2000: open to all aspects of analysis,
- 2003: mainly energy and agriculture,
- 2005: “Investment, Growth and the Environment”, and
- 2008: “Services and the Environment”.

In addition, the CEC provides most of the papers on its homepage for public access (CEC 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05). The symposia facilitate the information of the civil society on the actual impact of the NAFTA and thus directly address the main concern of the public prior to the NAFTA ratification.

#### **7.4.2.2 The Role of the Nation States**

Neither Article 10.6(d) nor the self-commitments of the countries establish any requirements for the nation states to participate in the ongoing NAFTA EA. Thus the influence and role of the signatory countries can only be found in the Council decisions. In specific, this influence resulted in the Council decided on the elaboration of the Analytic Framework, on the creation of the biannual symposia and on their topics.

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<sup>103</sup> CEC 2000: First North American Symposium on Understanding the Linkages between Trade and Environment; id., no date: Trade and Environment in the Americas 2003; id.: Trade and Environment in North America 05, analysis of titles and abstracts.

### 7.4.2.3 The Role of the Non-governmental Level

The non-governmental level plays a vital role in the implementation of the NAFTA EA (see also Chapter 7.3.3), whereas three central tasks shall be mentioned here. First the development phase of the Analytic Framework was open for public and JPAC comments and integrated NGOs as a partner in its elaboration (Podhora 2009b: 7). Second, not only academia but also NGOs as representatives of the public can conduct studies for the NAFTA EA (e.g. Sierra Club et al., see Chapter 8.2/ Case Study 2). Furthermore, the authors presented their results in public symposia, allowing the public to directly learn about their results. Third, the JPAC continuously works with the interaction between NAFTA and the environment. Though this level is not explicitly mentioned in the NAAEC, the public takes up its usual role as advisory and commenting level without any explicit and mandatory requirements set out in Article 10.6<sup>104</sup>.

### 7.4.3 Reasons for Integrating the NAFTA EA into the NAAEC

In the early 1990s, there existed strong public resistance toward NAFTA. The integration of the NAFTA EA into the NAAEC can be regarded as a direct response to public and political concern to NAFTA's possible environmental impacts. During the NAFTA negotiations, NGOs, for example, demanded an extensive environmental assessment of the trade agreement (Markell, Knox 2003: 7). It thereby needs to be emphasized, that there was no connection between the transboundary EIA and the NAFTA EA but that these type of the instrument were regarded as two separate topics (Expert R).

### 7.4.4 Discussion and Challenges with respect to the Implementation of Article 10.6(d)

NAFTA is the first (Expert M) and only existing free trade agreement that applies for a constant evaluation of its environmental impacts through its environmental side agreement (Carpentier 2006: 260, Expert C)<sup>105</sup>. The results of these NAFTA EA studies are regarded differently. The information of the studies is regarded as high class scientific work concerning the environment and trade dimension (Expert N). However, they miss a common structure to work with the results, for example as they do not always establish recommendations as a fix part and results of their analysis (see Chapter 7.3.2.1.2). In addition one may also question the value of the studies when taking into account the comparatively small amount of 49 studies that were conducted in 15 years of NAFTA's existence (see Annex III).

In contrast, Expert J regards them as less valuable as they were not conducted in the first years of the NAFTA. In addition, they focus on detailed studies and do not create a complete image of NAFTA's environmental impacts, whereas uniting regulations indicator systems, checklists are

<sup>104</sup> However, it needs further research to clearly link their work to selected NAFTA EAs as the explicit linkages between the topics of the JPAC sessions and the results of the NAFTA EA are comparatively scarce.

<sup>105</sup> The Agreement on Environmental Cooperation between the Government of Canada and the Government of the Republic of Chile (CCAEC) (1997) related to the Canada-Chile Free Trade Agreement (CCFTA) includes in its Article 10.7(d) that the Council aims at "considering on an ongoing basis the environmental effects of the CCFTA." It requires further research to identify the actual results of this article and to what extent further trade-related environmental accords refer to ex-post assessments of the respective trade agreement.

still missing. In sum, the challenges of the NAFTA EA are of wide choice, though. They cover methodological obstacles as well as political aspects of the implementation.

Three central methodological challenges were identified. First, these challenges mainly can be found in the analysis itself. As a scientific basis for the ongoing assessment, the CEC created the Analytic Framework to identify NAFTA's environmental impacts. Despite this scientific back-up, however, it remains difficult to draw a line between the environmental impacts of NAFTA's trade and those effects generated by other sources (CEC 1999a: 26 ff, Hufbauer, Schott 2005: 177). Trade impacts need to be identified as being clearly linked to NAFTA, not to any other trade agreements (CEC 1999a: 26 ff). In 1994, for example the three countries did not only sign NAFTA but also joined the then newly created WTO. As further sources of environmental impacts policy changes on the domestic level that were detached from NAFTA as well as a normal environmental degradation can be mentioned (e.g. Guerrero et al., see Chapter 8.2/ Case Study 1).

Second, methodological challenges can be found in the availability of the data. There does not exist a trilateral analysis covering the NAFTA as a complete agreement, neither as ex-ante nor as ex-post assessment. This gap may cause problems during the ex-post evaluation, as there is no reference data available for the ongoing studies (see Chapter 8.1.1). Using the information gathered in the Canadian and US American ex-ante assessments of the NAFTA as reference data would have been in conflict with the CEC's trinationally equal approach<sup>106</sup>. Furthermore, the two domestic ex-ante assessments were established according to an individual methodology, whose scientific backing can be regarded as limited.

Third, unlike the environmental agreement NAAEC that requires an evaluation within its environmental scope, the NAFTA itself does not call for its ongoing economic assessment in order to create an economic reference data to form a trinational common basis for the NAFTA EA (NAFTA 1992). Thus trinational economic data relevant for a profound and extensive environmental assessment is missing.

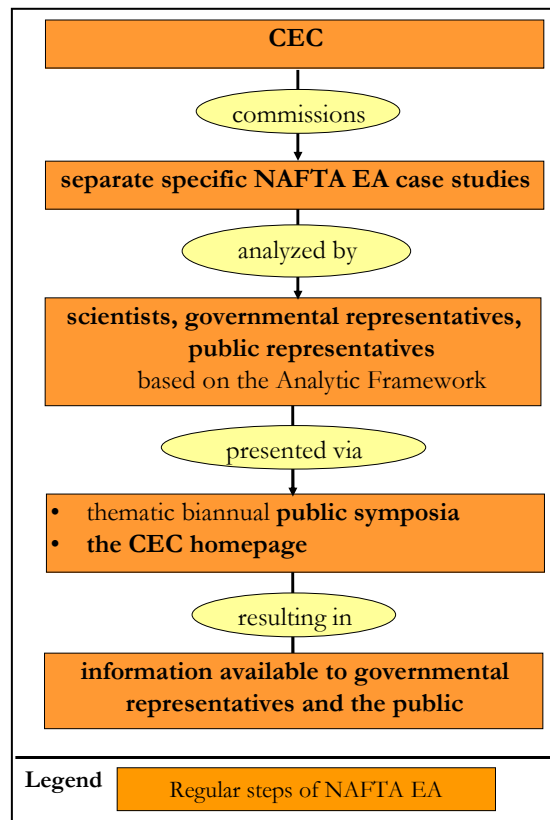
Concerning the political dimension, it needs to be pointed out, that there exist many factors that limit the implementation of possible consequences that may result from the ex-post assessments into trade policy. The ex-post assessment can be regarded as a type of monitoring for the NAFTA. It cannot be regarded as a 'regular' SEA, which is usually conducted ex-ante, whereas the NAFTA EA is clearly ex-post (Expert M). Thereby, its procedure differs from the one of the ex-ante evaluation presented in Chapter 4 (Figure 5), as Figure 13 illustrate. Unlike an environmental impact assessment that identifies the probable future impacts by gathering data information as well as public and governmental comments and then requires mitigation measures to reduce the negative environmental impacts, the NAFTA EA study purely aims at identifying the negative as well as positive environmental impacts in studies with individual scopes – a clear extension to the general idea of assessing negative impacts. Thereby, it becomes obvious that

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<sup>106</sup> The value of these domestic assessments can also be questioned, as for example the environmental reviews of the US were realized in a very short period of time on a small scientific basis and in a political climate that strongly favored the NAFTA (Expert I). One may therefore question their use for an objective and scientific approach to the ex-post assessment.

there are no political activities required based on the results of the NAFTA EA.

Figure 14: Central components of the NAFTA EA relevant for the dissertation  
(author's compilation, according to references provided in this chapter, Expert C, Expert M)



Block (2003: 34) points out, that generally “these [trade] assessments have not yet demonstrated their policy relevance and have not appreciably influenced the process of negotiating language in trade texts”. Here again it needs to be emphasized, that the NAAEC is predominantly an agreement on environmental cooperation not on greening NAFTA. Thereby, NAAEC in itself is not designed to question trade liberalization but the environmental agreement is related to trade liberalization as one of its objective (Expert J). For the three governments as strong believers in free trade the difficulty in objectively assessing NAFTA’s environmental impacts mainly lies within political reluctance rather than in methodological challenges (Block 2003: 33). Thus NAFTA does not comprise possible changes in the liberalization process that are a result of the NAFTA EA and that might favor environmental protection (Expert J).

In terms of a possible integration of the results into NAFTA and into trade liberalization, the CEC hardly finds a counterpart to work with in the Free Trade Commission of the NAFTA. The Free Trade Commission has no obligation to cooperate with the CEC (Ten-Year Review and Assessment Committee 2004: 24, Expert J), even though the CEC has a clear mandate to cooperate with the Free Trade Commission (NAAEC 1993: Art. 10.6). Only in 2007 the Trade Ministers participated in the annual meeting of the CEC for the first time (Expert C). Thus political reluctance is also reflected in the weak cooperation of the two Commissions.

Based on the approval of the Council, the CEC could integrate the results of the assessments into



its work, either completely or in some of their elements, for example concerning certain sectors, regions and topics. One, however, needs to take into account the relevance of the Council to approve the Commission's work plan. The Council members, therefore, have to be committed and to be convinced that the issue is of high trilateral relevance and that it matches the scope given to the CEC – facts that are obviously missing as the CEC's working program barely takes up the results. Furthermore, the studies of the NAFTA EA could relate even more directly to the working program of the Commission. Trilateral species, however, form a relevant part of the CEC's work, but they are not covered in the studies so far (Analysis of titles and abstracts, CEC 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05).

Due to the limited supra-national scope of the NAAEC, the CEC cannot assign any tasks to the domestic level, but any domestic activity originates from the self-commitment of the signatory countries themselves. Domestic trade authorities, however, do not pay much attention to the results of the CEC and question the need and usefulness of the Commission in general. Additionally, based on the domestic experience, one may come to the conclusion, that the national environmental ministers and agencies do not have a strong influence on the trade ministries in the national debates on trade and environment (Expert B). Thus in practice, the integration of the NAFTA EA results into the decisions and policies of the domestic level therefore may also be questioned.

Therefore there barely exists an opportunity to integrate possible consequences based on the NAFTA's assessment into trade policy (Expert J). If NAFTA would be re-negotiated, the results of the assessments could be used to strengthen a national or the environmental position in the negotiations.

Even though the political will to deal with the results seems to be quite weak, the results could support the work of further national or binational institutions, which are not directly related to NAFTA. Case studies on air pollution and water resources in North America might be valuable, for example, for binational working groups and institutions as the Joint Advisory Committee for the Improvement of Air Quality, the International Boundary and Water Commission respectively Comisión Internacional para Límites y Aguas and the International Joint Commission.

## 7.5 Central Challenges and Theoretical Discussion

First of all, it needs to be pointed out, that no completely new type of environmental assessment was integrated into NAAEC, as all approaches already existed in all or in some of the signatory countries: the domestic environmental assessment in terms of project EIA (the SEA was at the time the NAAEC entered into force). Only the specification of ex-post trade assessment was new to all member states. Thereby, the countries created an extended procedure for NAFTA's ongoing environmental assessment through Article 10.6(d). However, there existed first approaches to ex-ante trade assessment in Canada and the US. Furthermore, ex-post assessments as monitoring of ex-ante assessment were partly of the domestic ex-ante assessments on project and transboundary EIA, respectively, and SEA for policies, plans and programs.

Summarized, there does not exist any interaction between the three types of environmental assessment that are part of the NAAEC. Even domestic EIA and transboundary EIA miss a linkage, though they are usually closely connected. Furthermore, there is no interaction between ex-ante analysis through project EIA, transboundary EIA and SEA for policies, plans and programs and the ex-post procedures of NAFTA EA. However, the various forms of assignments to the CEC, the different influence of the further governance levels and the various forms of practical implementation reflect the extensive scope of opportunities that especially the NAAEC and the working program of the CEC provide to environmental protection within the North American hemisphere as well as through the instrument itself.

### 7.5.1 Summarizing Discussion and Challenges of Environmental Assessment in the NAAEC

Environmental assessment in its different types holds a comparatively strong position in the NAAEC. Though all three articles deal with the instrument, their integration into NAAEC is based on different reasons and presents individual scopes. All three forms of environmental assessment, among others, show extensive differences in their integration into the NAAEC and their practical implementation through the CEC. The specific challenges identified and described in Chapters 7.1.4, 7.2.4 and 7.3.4 identified two common key challenges that apply to all three types of environmental assessment and that are thus relevant for this dissertation. Both challenges relate to the political willingness of the signatory countries towards the instrument.

**First,** all three environmental assessment aspects were integrated into NAAEC based on different reasons. With respect to the domestic environmental assessment, one may question the need for explicitly integrating it. The countries, for instance, had already re-affirmed domestic approaches to environmental assessment through the Rio Convention, and again re-affirmed the Rio Convention in NAAEC's Preamble. Furthermore, the NAAEC prevents a reduction of existing domestic environmental regulations and strives for their improvement, so there does not really seem to exist the need to a self-commitment dealing with environmental assessment.

In contrast to the clearly domestic commitment, the NAAEC most likely gave impetus to a trilateral approach of transboundary EIA and moved the countries away from a domestically and binationally limited focus towards a hemisphere-wide approach. Without NAAEC, the Security and Prosperity Partnership might have taken up binational negotiations of transboundary EIA, as the SPP does not dedicate its work to purely trilateral aspects like the CEC.

Furthermore, most likely there would not have existed a trilateral approach of NAFTA's environmental assessment, as there would neither have existed a methodological background nor a trilaterally equal guiding institution to supervise the analysis.

Thus here again, the political willingness becomes obvious as the instrument is integrated into the NAAEC based on different political interests, pressures and historical developments. However, these interests and developments cannot necessarily be regarded as related to the then following practical implementation of the respective articles.

**Second,** a different discrepancy for the types of environmental assessment can be found between the NAAEC Articles and their implementation. In the NAAEC itself, all three forms of

environmental assessment show a different level of detail, on the one hand within the NAAEC article itself, on the other hand with respect to the practical implementation of the Articles. The domestic EA and the NAFTA EA are briefly integrated as a sub-item of Articles 2.1 and 10.6 without any further explicit description of the domestic or the Council's tasks. Both articles are implemented in a wide scope that is not mentioned in them: the development of the Analytic Framework and the public symposia, among others, are forms of implementation that were approved by the Council as ways of implementing Article 10.6 without an explicit reference to them in the NAAEC. The practical implementation of Article 2.1(e), however, should be regarded in close connection with Article 3, in which the countries oblige themselves to improve their domestic regulations. The NAFTA countries have improved and extended their regulations on domestic environmental assessment, for instance by amending or extending their legal framework on environmental assessment, which might be a result of the commitment to the NAAEC.

Article 10.7, however, exclusively refers to the assignments on transboundary EIA that are described with great detail and include a justification for the instrument. In contrast to this extensive description, the CEC's tasks toward the transboundary EIA agreement are interpreted in close relation to the Article, for instance by arguing, that the assignments of the CEC are met: The CEC's Secretariat elaborated recommendations mainly by analyzing existing agreements that covered transboundary EIA elements<sup>107</sup> and thereby clearly stuck to the mandate given in the NAAEC.

The basis for reaching environmental objectives and the implementation of recommendations requires the political will on the highest political level (Expert M). Summarizing the development and implementation of the three types of environmental assessment as part of the NAAEC this argument proves to be right: One may argue therefore, that the implementation of the article depends on the political willingness of the countries to work with the respective topic and to integrate the CEC into the process, and not necessarily on the details as they are anchored in the NAAEC. However, a detailed integration of the tasks and commitments could open an extensive channel to public participation and demand (for example the public in general, NGOs and the Joint Public Advisory Committee).

### 7.5.2 Multi-level Governance of Environmental Assessment in the NAAEC

The three types of environmental assessment are connected differently to the different levels of and types of multi-level governance. The tables 10, 11 and 12 individually compare the types of the instrument to illustrate the then following common discussion.

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<sup>107</sup> During the research, usually the participation of the Secretariat during the establishment of the recommendations was mentioned (Expert R). No integration of external experts as support could be identified, for example common workshops as they were realized for the development of the Analytic Framework.

Table 10: References of multi-level governance to types of environmental assessment as part of the NAAEC – domestic environmental assessment (author's compilation)

Domestic EA	Type I	Type II	Semi-type
<b>a) type of jurisdiction</b>	<i>general purpose:</i> ---	<i>task-specific purpose:</i> The NAAEC integrates domestic environmental assessment without describing its practical implementation.	<i>specific tasks following a general purpose:</i> ---
<b>b) membership</b> - horizontal - vertical - intermediary	<i>non-intersecting:</i> The membership is non-intersecting, neither on a vertical, horizontal nor intermediary level. Based on Art. 2.1(e), the domestic EA does not overlap with NAFTA EA. Overlap with transboundary EIA is excluded, as domestic EA is limited to domestic territory.	<i>intersecting:</i> ---	<i>semi-intersecting depending on the legal framework and the practical implementation:</i> ---
<b>c) level of jurisdiction</b> - international - national - regional - non-governmental	<i>limited number of levels:</i> The domestic level is mandatory.	<i>unlimited number of levels:</i> ---	<i>officially limited number of levels, but involving an unlimited number of levels in the practical implementation:</i> An extension of the quantity of levels during the domestic application could be possible (though not mentioned in the NAAEC).
<b>d) design</b> - legal - practical	<i>system-wide architecture</i> ---	<i>flexible design:</i> Implementation is flexible, because it is not defined in the NAAEC.	<i>a fixed background permits flexible application:</i> ---

Table 11: References of multi-level governance to types of environmental assessment as part of the NAAEC – transboundary EIA  
(author's compilation)

Transboundary EIA	Type I	Type II	Semi-type
<b>a) type of jurisdiction</b>	<i>general purpose:</i> ---	<i>task-specific purpose:</i> The NAAEC specifies tasks for transboundary cooperation as part of transboundary EIA.	<i>specific tasks following a general purpose:</i> ---
<b>b) membership</b> - horizontal - vertical - intermediary	<i>non-intersecting:</i> The membership is non-intersecting, neither on a vertical, horizontal nor on an intermediary level. Based on Art. 10.7, transboundary EIA does not overlap with domestic EA or the NAFTA EA.	<i>intersecting:</i> ---	<i>semi-intersecting depending on the legal framework and the practical implementation:</i> ---
<b>c) level of jurisdiction</b> - international - national - regional - non-governmental	<i>limited number of levels:</i> Two levels are mandatory: - the CEC is asked to establish recommendations, - the nation states are asked to sign an Agreement on Transboundary EIA.	<i>unlimited number of levels:</i> Different public levels comment on the progress of the Agreement on Transboundary EIA.	<i>officially limited number of levels, involving an unlimited number of levels in the practical implementation:</i> The two mandatory levels can be extended e.g. through a variety of stakeholders from the public level.
<b>d) design</b> - legal - practical	<i>system-wide architecture:</i> The steps for the instrument (agreement and content) are clearly set out in the NAAEC.	<i>flexible design:</i> ---	<i>a fixed background permits flexible application:</i> ---

Table 12: References of multi-level governance to types of environmental assessment as part of the NAAEC – NAFTA EA  
(author's compilation)

NAFTA EA	Type I	Type II	Semi-type
<b>a) type of jurisdiction</b>	<b><i>general purpose:</i></b> The NAAEC integrates NAFTA EA without describing its practical implementation.	<b><i>task-specific purpose:</i></b> ---	<b><i>specific tasks following a general purpose:</i></b> ---
<b>b) membership</b> - horizontal - vertical - intermediary	<b><i>non-intersecting:</i></b> The membership is non-intersecting, neither on a vertical, horizontal nor on an intermediary level (though unilaterally on the international horizontal level).  Based on Art. 10.6, NAFTA EA does not overlap with domestic EA or transboundary EIA.	<b><i>intersecting:</i></b> ---	<b><i>semi-intersecting depending on the legal framework and the practical implementation:</i></b> ---
<b>c) level of jurisdiction</b> - international - national - regional - non-governmental	<b><i>limited number of levels:</i></b> The CEC as international level is mandatory.	<b><i>unlimited number of levels:</i></b> ---	<b><i>officially limited number of levels, involving an unlimited number of levels in the practical implementation:</i></b> ---
<b>d) design</b> - legal - practical	<b><i>system-wide architecture:</i></b> ---	<b><i>flexible design:</i></b> NAAEC integrates NAFTA environmental assessment without	<b><i>a fixed background permits flexible application:</i></b> ---

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		describing its practical implementation.	
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### a) Type of Jurisdiction

The integration of all three types of environmental assessment into the NAAEC can be regarded as following a task-specific purpose of the general environmental agreement. Thus multi-level governance **type II** applies **for all three types of environmental assessment**.

### b) Membership

The membership in terms of **domestic environmental assessment** can be regarded as rather **non-intersecting (type I)** on the **horizontal, vertical and intermediary level**.

With respect to the horizontal international intersection, several aspects lead to the relation to the missing intersection. Within the NAAEC itself, there is no explicit interaction between the three different types of environmental assessment based on Article 2.1(e). Concerning the international NAAEC – NAFTA – SPP dimension, there are no links of the instruments to the other agreements mentioned this article.

With respect to the intersection on the horizontal institutional international level, the CEC barely directly works with aspects related to this article, whereas this again shows a missing intersection (type I).

Further, Article 2.1(e) does not create a horizontal federal and subfederal intersection concerning the domestic environmental assessment of the different countries (type I), neither in terms of legislation nor in terms of governmental authorities. In addition and quite contrary to the closeness that the two types of the instrument usually have in the general implementation and even apart from the NAAEC, the Article 2.1(e) on domestic environmental assessment explicitly limits its influence and tasks to the respective national territory and thus limits the intersection with the transboundary EIA.

The vertical intersection also relates to multi-level governance type I. The article neither assigns any tasks to the CEC nor the subnational level, but it only refers to the self-commitment of the nation states. Not even the practical implementation of the article includes vertical intersections, as the work of the CEC concerning domestic environmental assessment can be regarded as rather detached from the article. Thus summarized, there is no intersection vertically.

The influence of the intermediary level is also limited concerning the domestic environmental assessment. The article, purely emphasizing the self-commitment of the countries, does not include a public participation procedure through the mechanisms of the NAAEC. However, the domestic practical application includes a rather constant participatory process, which can be regarded as rather detached from NAAEC (type I).

The membership in terms of **transboundary EIA** can be regarded as rather **non-intersecting (type I)** on the **horizontal, vertical and intermediary level**.

The transboundary EIA is clearly non-intersecting (type I) on the horizontal international level. Within the NAAEC itself, there are no intersections between the different types of environmental assessment set out in Article 10.7. In addition, and despite the fact that the Security and Prosperity Partnership took up the still-pending issue of the transboundary EIA agreement, there is no intersection on the level of NAAEC – NAFTA – SPP in terms of this instrument, neither in the NAAEC itself nor in its practical implementation.



The horizontal federal level includes initial intersecting elements, as the country of origin is asked to consider the needs and interests of the possibly affected party in its domestic procedure (type II). However, since no agreement has been signed on transboundary EIA, this possible future cooperation does not factor into the practical implementation of the article. The analysis summarizes the absent intersection and thus as multi-level governance type I.

The horizontal subfederal level is not included in any activity stated in Article 10.7 and is thus unrelated to any of the three types. When the agreement is eventually signed, however, this level might play a pertinent role. To a certain extent, possible subnational approaches to transboundary cooperation may lead one to trace a horizontal intersection between the project EIA and the transboundary EIA. The dissertation, however, did not conduct extensive research on the various subfederal components of transboundary EIA, so no conclusion can be drawn for Canada and the US. It can be indirectly concluded that there is no intersection on the Mexican subfederal level, as any project with transboundary impacts is a federal responsibility in Mexico.

As Article 10.7 assigns tasks to the CEC as well as to the federal level, opportunities for intersection on the vertical level could present themselves. The transboundary EIA is the only article that includes tasks for the CEC as well as for the national level. The levels, however, do not directly cooperate with each other; these tasks can rather be seen as follow-ups to earlier tasks, and are not meant to interconnect. The CEC's task ends before the domestic level starts its work (of establishing an agreement and especially of conducting transboundary EIA). Despite the clear distribution of the tasks to two distinct governmental levels, the signatory countries are not asked to integrate the results of the CEC's work: the countries are not obliged to comply with the recommendations established by the Commission.

Additionally, detailed analysis reveals that an upward intersection similar to the one concerning domestic environmental assessment comes only partially into play. The National and Governmental Advisory Committees can comment on the development of the practical implementation of Article 10.7, and the federal level may incorporate their comments. In turn, the federal level influences the work of the CEC, as well as the progress of the Agreement on Transboundary EIA – under the auspices of the NAAEC as well as of the SPP – and thus enjoys a comparatively strong intersection. The CEC, however, cannot force the signatory countries to sign the Agreement and support its progress, and what is more, it has no influence on the subnational level. The NAAEC itself does not have any influence on the federal and subfederal regulations concerning transboundary EIA. Thus summarized, this again clearly relates to type I.

In terms of the intermediary level, a clear relation to multi-level governance type I emerges once again. Public participation is not explicitly part of the article, but the JPAC, among others, commented on its practical application. As this public participation is not a fixed part of the procedure, however, it does not contribute to the classification of the level as semi-type.

Membership in terms of the **NAFTA EA is non-intersecting (type I) on the international horizontal level** and is **not applicable to the vertical and intermediary levels**.

On the international horizontal level, the NAFTA EA neither interacts within the NAAEC – NAFTA – SPP context, nor within the relationship between the CEC and the Free Trade Commission (though unilaterally designed to support the Free Trade Commission), nor with the other two types of environmental assessment (type I).

The NAFTA EA does not interact with the federal and subfederal level. As these two levels are missing, there is no opportunity for a vertical intersection either.

The influence of the intermediary level is also limited, as the public is not explicitly mentioned in Article 10.6. In terms of the article's practical implementation, the comments of the public and the JPAC are voluntary and not a fixed part of the procedure, so that – like the transboundary EIA – it can be regarded as rather detached from NAAEC (type I).

### c) Levels of jurisdiction

With a very limited number of levels – and the nation states themselves as the only accountable level – domestic environmental assessment is clearly linked to multi-level governance type I. Extension to an unlimited number of levels would be possible, for example, through public comments on the topic, an uptake by the JPAC, and the general support of the CEC (e.g. through topic-related publications). These activities are not very likely to happen, however, as they contradict the trilateral objectives of the NAAEC and the Commission.

Concerning transboundary EIA, the relation to the types is not as clear as with domestic environmental assessment. With respect to multi-level governance type I, Article 10.7 identifies two separate levels of authority and responsibility: the CEC to develop recommendations and the nation states to sign the agreement and to apply its content. In contrast, type II interprets the article more broadly and includes additional levels in its practical implementation. The JPAC (a mandatory level in type II) with its comments and the public with its requests (for example, the request of the Sierra Club of Canada made to the Canadian Attorney General) are part of the implementation process omitted from Article 10.7. Further input from national organs such as the Governmental and National Advisory Committees is also likely, as both committees are located on the domestic level.<sup>108</sup>

In sum – and similar to the final decision in paragraph (c) of Chapter 6 – the semi-type will be also be defined, because the interpretation emphasizes the large number of opportunities and thus the flexibility that the NAAEC provides.

Again with a very limited number of levels – and the CEC as the only accountable level – the NAFTA EA is clearly related to multi-level governance type I when narrowly interpreted. Additional levels are less involved. The public may participate in the symposia, and the JPAC partly contributes to the environment-trade linkage, but these activities do not influence and are not directly related to the NAFTA EA, not even according to the broader interpretation of type II.

To recap, the different **types of environmental assessment** are related to the **semi-type and type I both** in terms of legal authority and practical implementation.

### d) Design

The design is closely connected with the political integration of the concept of environmental assessment. Domestic environmental assessment is clearly related to multi-level governance type

<sup>108</sup> The dissertation research did not identify other instances in which the Governmental and National Advisory Committees influenced the types of environmental assessment within the NAAEC.

II: Article 2.1(e) briefly refers to the voluntary self-commitment of the countries, but does not specify actual implementation steps. Thus the member states adhere to their national regulations with respect to EIA and SEA, which are basically detached from NAAEC and the direct influence of the CEC.

In contrast to domestic environmental assessment, transboundary EIA is clearly connected to type I: Given that the CEC is mandated to establish recommendations within a timeframe of three years, and that the nation states are to sign an Agreement on Transboundary EIA, the next steps and tasks including the content of the Agreement are definitively set out. In their practical implementation of Article 10.7, the CEC and the countries stick closely to these requirements. As there are no time parameters for signing the transboundary EIA agreement, however, this item has been pending for more than 10 years, ever since the draft was developed.

This relation to type I is also emphasized by the Council's refusal to elaborate a Secretariat Report that would have kickstarted negotiations under the auspices of the Security and Prosperity Partnership.

The NAFTA EA stands in complete contrast to transboundary EIA and thus is also related to type II. The NAAEC very briefly refers to the instrument in Article 10.6, and the Council developed a new instrument by approving a variety of different tasks associated with the ongoing assessment of NAFTA (mainly the development of the Analytic Framework, NAFTA EA studies, and public symposia).

**Thus conclusion of this analysis is that no clear type of multi-level governance applies to all three types of environmental assessment.** Each type of the instrument relates separately to each of the types of multi-level governance, and no common direction can be identified.

The majority of the four topics, however, show a certain flexibility and combines – partly in first approaches – type I and II with the **semi-type**. This extension emphasizes the general idea of the NAAEC: The NAAEC provides the general setting for trilateral environmental cooperation, which is then further developed and fine-tuned by the Council-approved CEC working program.

### 7.5.3 Key Statement for Greening NAFTA applied to Environmental Assessment in the NAAEC

An analysis of the articles on environmental assessment confirms that NAAEC itself is an agreement to foster trilateral environmental cooperation, but not necessarily to interact with or green NAFTA. The inclusion of the three types of environmental assessment into the NAAEC made substantial political impact, although none of the types was integrated expressly in order to green NAFTA. The implementation of the different forms of environmental assessment reflects the scope and the focus of the accord: the NAAEC is an “agreement on environmental cooperation” (hence the letters “AEC” in NAAEC) rather than an agreement on greening NAFTA.

Table 13 summarizes how the three types of environmental assessment presently contribute to the greening of NAFTA based on the criteria outlined in Chapter 2.2.

Table 13: Contributions of the types of environmental assessment included in the NAAEC to greening NAFTA

(author's compilation)

EA type	scientific methodological analysis used to identify NAFTA's impacts	mitigation of negative impacts, increase of positive impacts
<b>Art. 2.1(e) domestic environmental assessment</b>	<ul style="list-style-type: none"> <li>- methodological analysis of NAFTA's impacts is not required, nor is the greening of NAFTA as part of domestic environmental assessment</li> <li>- Analytic Framework does not explicitly refer to project EIA nor to SEA as a tool for identifying NAFTA's impacts</li> </ul>	<ul style="list-style-type: none"> <li>- no reference to increasing the positive/ decreasing the negative impacts was identified in the analysis of Art. 2.1(e)</li> </ul>
<b>transboundary EIA</b>	<ul style="list-style-type: none"> <li>- no methodological analysis of NAFTA's impacts is required, nor is the greening of NAFTA as part of transboundary EIA</li> <li>- Analytic Framework does not explicitly refer to transboundary EIA as tool for identifying NAFTA's impacts</li> </ul>	<ul style="list-style-type: none"> <li>- no reference to increasing the positive/ decreasing the negative impacts was identified in the analysis of Art. 10.7</li> </ul>
<b>NAFTA EA</b>	<ul style="list-style-type: none"> <li>- development of Analytic Framework based on NAAEC's Art. 10.6(d)</li> <li>- analysis of NAFTA's environmental impacts</li> </ul>	<ul style="list-style-type: none"> <li>- no reference to increasing the positive/ decreasing the negative impacts was identified in the analysis of Art. 10.6</li> <li>- reference to these impacts in the Analytic Framework</li> </ul>

As the table illustrates, none of the three types of environmental assessment currently contributes to the greening of NAFTA according to the Key Statement set out in Chapter 2.2. As they are described in the NAAEC, **domestic environmental assessment** and the **transboundary EIA** are not linked to NAFTA in terms of their general scope. They are also not included in the Analytic Framework as a tool for identifying NAFTA's environmental impacts. Their influence on greening NAFTA can therefore be regarded as non-existent.

Out of all the other types of environmental assessment, **NAFTA EA** contributes the most to the greening of the NAFTA. In order to fulfill the NAFTA EA, the CEC generated an extensive Analytic Framework that provides a scientific basis for the ongoing NAFTA assessment (requirement 1a). In accordance with Article 10.6(d), the CEC established a new and original scientific approach by closely cooperating with scientists and NGOs. The studies offer a deeper

understanding of NAFTA's positive and negative environmental impacts, and produce information useful to the greening of NAFTA. The Key Statement (requirement 2) also requires, however, a decrease in the negative and an increase in the positive impacts of NAFTA. Because policymakers have not welcomed and put into action the results of these studies, the contribution of NAFTA EA to the greening of NAFTA remains incomplete.



**PART C**  
**The Concept of NAFTA'S GREEN IMPACT:**  
**Greening NAFTA**  
**through Environmental Assessment**  
**Based on Multi-level Governance**





## **8 The Concept of NAFTA'S GREEN IMPACT: Greening NAFTA through Environmental Assessment based on Multi-level Governance**

The establishment of the NAAEC as a side agreement to the free trade agreement NAFTA suggests that economy and ecology are closely entwined. As the previous chapters showed, however, the hypothesis that the interrelationship of these agreements implies that they also successfully integrate and interact with one another is basically wrong. From the three types of environmental assessment in the NAAEC – domestic environmental assessment, transboundary EIA and NAFTA EA – only the NAFTA EA is explicitly linked to the trade agreement. The NAFTA EA developed the scientific Analytic Framework for assessing the environmental effects of the trade agreement and thus fulfills the first requirement for greening NAFTA set out in the key statement in Chapter 2. However, the NAFTA EA fails the second requirement – to minimize the negative and increase the positive environmental impacts – and thus is not being utilized to actually green the trade agreement (see Chapter 7). Its contribution to greening the trade accord, therefore, is practically non-existent, especially as it fails to implement the assessment results. In contrast to the NAFTA EA, domestic environmental assessment and transboundary EIA are not linked with NAFTA at all, neither in the NAAEC in relation to legal grounding, nor in terms of practical implementation, nor in the scientific Analytic Framework or its application of the NAFTA EA studies.

The dissertation examines these neglected interactions and applications, and attempts to integrate the different approaches to environmental assessment into the process of greening NAFTA. The concept of NAFTA'S GREEN IMPACT presented here grew out of the extensive analysis in Chapters 6 and 7, and is based on the existing domestic and international approaches to environmental assessment in the signatory countries examined in Chapter 4. The proposal is embedded in the theoretical concept of multi-level governance, since the different governance levels play a key role in the NAAEC as well as in the three types of environmental assessment.

Chapter 8 consists of the following five parts. First, it establishes a rationale for the concept of NAFTA'S GREEN IMPACT, investigating NAFTA's green status quo and why NAFTA needs to be green (see Chapter 8.1).

Second, the chapter appraises the interaction between the different types of environmental assessment and NAFTA's environmental impacts on the basis of two selected case studies from the NAFTA EA (see Chapter 8.2.1, for the selection criteria for the two studies see Chapter 1.3.2):

- (1) The Forestry Industry in the State of Chihuahua: Economic, Ecological and Social Impacts post-NAFTA (Guerrero et al. 2000) and
- (2) NAFTA Transportation Corridors: Approaches to Assessing Environmental Impacts and Alternatives (Sierra Club et al. 2000).

Third, the chapter defines the role and influence of multi-level governance in the concept of NAFTA'S GREEN IMPACT.

Fourth, the chapter develops the concept of NAFTA'S GREEN IMPACT. It links the need for greening NAFTA with contributions that the types of environmental assessment could make to the concept, supported by multi-level governance type II. The concept of NAFTA'S GREEN IMPACT itself consists of a three-step analytic, adaptation and mitigation cycle comprising a total of five tasks. The cycle is divided into two parts. The first part includes the first and third steps, which focus on the ex-post procedure of the NAFTA EA; the second part includes the second step, which addresses opportunities that the ex-ante analyses of project, transboundary and strategic environmental assessment could provide for greening NAFTA (see Chapter 8.4).

Fifth, the chapter discusses both specific and general challenges to, as well as the limits of, the implementation of the concept of NAFTA'S GREEN IMPACT. The general challenges to and limits of NAAEC and the political influence of its governance levels, as well as previous experiences with practical application of the different types of environmental assessment under the auspices of the NAAEC, prompt the author to consider these issues (see Chapter 8.5).

Sixth, the chapter concludes by transplanting the concept of NAFTA'S GREEN IMPACT into other trade agreements in order to prove its reliability and effectiveness, and to hint at the requirements of the concept in the context of other trade accords (see Chapter 8.6).

## **8.1 Reference Frame for Greening NAFTA: The Necessity of NAFTA'S GREEN IMPACT**

This section provides the rationale for greening NAFTA, regarding NAFTA's green status quo as a starting point and forecasting the ways in which a green NAFTA will be relevant in the future. This rationale establishes the basis for the concept of NAFTA'S GREEN IMPACT.

### **8.1.1 Status Quo: How green is NAFTA?**

During the past approximately ten years, the 49 studies presented on the CEC homepage of the NAFTA EA have provided a profound analysis of NAFTA's environmental impacts within a comparatively narrow scope of sectors and/ or regions (analysis of abstracts from CEC 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05, Expert J). The studies identified positive and negative environmental effects of the trade agreement, they also found that the attribution of specific environmental effects to NAFTA cannot be proven. Furthermore, they revealed uncertainties in the analysis due to missing information and reference data.

Positive impacts can be detected in the increased environmental responsibility in

Mexican manufacturing industries due to the new market opportunities that NAFTA and consumer demands provide. This responsibility is “positively and significantly associated with environmental performance outcome” (Wisner, Epstein 2006: 1; by examples of this study). The creation of the NAAEC and the work of the CEC are also regarded as a positive environmental impact of NAFTA: The Commission “has resulted in meaningful environmental programs and projects at intersections of trade and the stewardship of the environment at the local and regional levels” (Plaut 2005: 3). Plaut names shade-grown coffee and the support of a DDT agreement as examples of CEC success stories (id.: 4 f, 7).

Negative impacts were partly detected in the two NAFTA EA case studies, among others. The increasing transportation of products, goods and materials among the signatory countries impacts the air quality in the border areas, as has been proven in the case of Nuevo Laredo/ Laredo (US-Mexico) and Detroit/ Windsor (Canada-US) (Sierra Club et al. 2000). Furthermore, logging in the Mexican Sierra Madre Occidental in Chihuahua have a few negative impacts on forests, an impact that is partly attributable to NAFTA as well as other, sometimes obscure factors (Guerrero et al. 2000).<sup>109</sup> In sum, the studies showed that neither the expected “race-to-the-bottom” nor the “all-boats-will-rise” prediction became reality (Expert M).

These effects, however, cannot always be easily identified. Some NAFTA EA studies note that information on the actual environmental impact under consideration is limited, for example, due to inadequate data or a lack of continuity in the analysis. Sierra Club et al. (2000: 31, 46) cite three main reasons for the lack of information in their research for Case Study 2 “NAFTA Transportation Corridors” (see Chapter 8.2): difficulty in accessing specific data (for example, data on key indicators at the regional and community level), data that was inaccessible to the public (for instance, not available on the Internet or in libraries) and uncollected data (for example, due to the lack of a ex-ante mandate for data collection). Stressing the need for further research, the authors (id.: 14) of this study describe the following instance as an example of how missing data affected their inquiries:

While one cannot assertively state the extent to which NAFTA trucks have contributed to the upsurge in ozone exceedances recorded in these cities further north on the I-35 trade route, the dramatic increase in the number of exceedances post-NAFTA suggests, at a minimum, an area for further research and study. With the heavy volume of heavy-duty trucks traveling through Laredo, PM [particulate matters] levels are of particular concern. [...] However, PM monitoring data is not yet available as the TNRCC [Texas Natural Resource Conservation Commission, the present Texas Commission on Environmental Quality] and EPA [US Environmental Protection Agency] began its collection as recently as

<sup>109</sup> Since Chapter 8.2.1 describes the negative environmental impacts of these two case studies extensively, they are not further discussed here.

1999. Further, with no baseline data collected, there will be no accurate method by which to judge the increase of PM since the passage of NAFTA (underlined by author).

In addition, the studies do not always identify which impacts are caused by NAFTA, as Martínez Rodríguez (2003a, b) admits in his study “Aquifers and Agrochemicals in a Border Region (2003a): NAFTA Challenges and Opportunities for Mexican Agriculture”: “[T]his study does not distinguish between effects since NAFTA came into force and effects due to it.”

The results of the NAFTA EA studies can be interpreted in various ways. Carpentier (2003: 4) suggests that NAFTA’s impacts show “some ‘hotspots’ that will need to be or are currently being addressed but have no widespread potential for environmental disaster.” Since the CEC selects the focus of the studies according to priority sectors and areas, one may conclude that all topics that concern negative influences of NAFTA on the environment are covered.

In contrast, one may argue that the existing studies of the NAFTA EA indicate that NAFTA’s green status as a whole trade agreement cannot be easily defined and thus requires further research.<sup>110</sup> The studies clearly reveal that impacts vary in their scope and intensity depending on different conditions such as NAFTA influences, natural resources/ ecosystems and legal interactions. The limited number of the NAFTA EA studies, the partially unclear or incomplete assessments in the studies and the lack of clarity as to whether the environmental impacts under examination are caused by NAFTA and/or other factors indicate that more information on the actual scope of NAFTA’s environmental impacts is certainly needed. Furthermore, many gaps in the analysis exist, suggesting that more negative environmental impacts exist that have not been uncovered so far.

### 8.1.2 The Need for Greening NAFTA: The Rationale

Fifteen years after NAFTA came into force, the ongoing environmental assessment of the trade agreement shows that NAFTA has had positive as well as negative environmental impacts. It is legitimate to ask, therefore, whether it is still necessary to green NAFTA. The following six arguments, drawn from the prior analysis of part B of this dissertation, expert interviews, literature and various selected NAFTA EA studies (not necessarily only the two case studies), make the case that the ongoing greening of NAFTA is still urgently needed. The need for greening NAFTA is based on environmental, institutional and political elements.

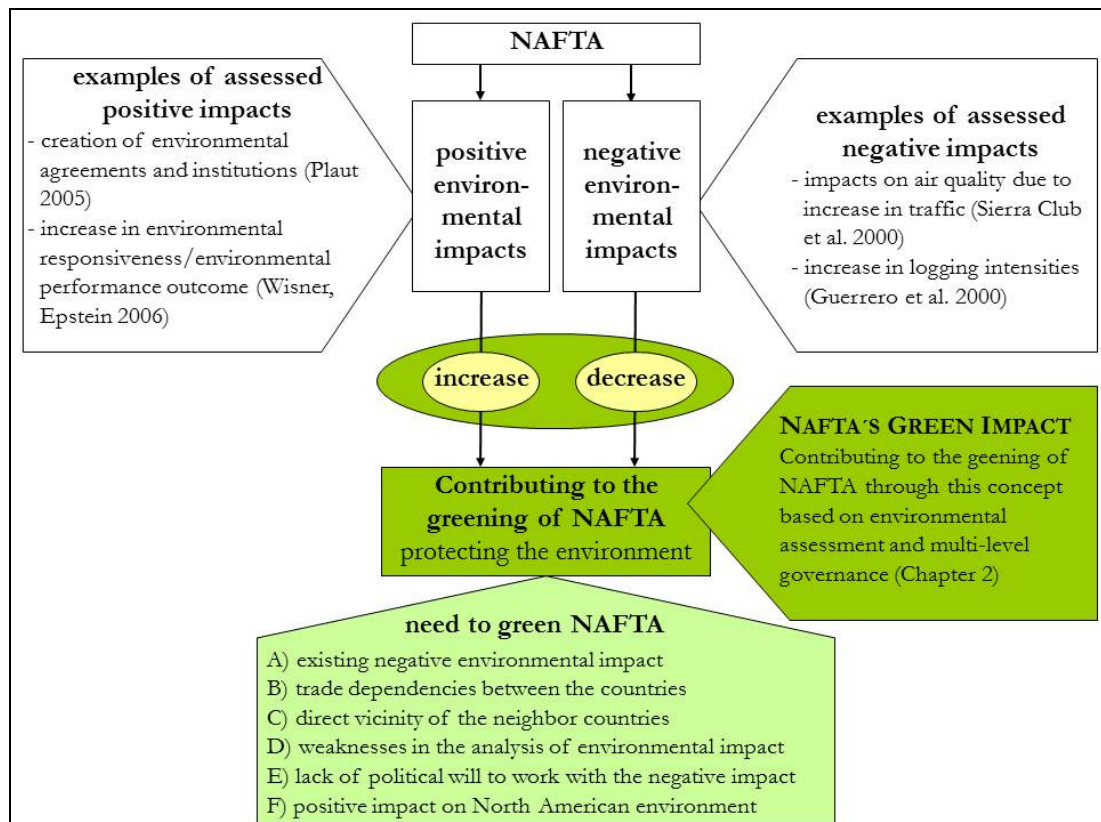
Figure 15 illustrates NAFTA’s positive and negative impacts in relation to the greening of NAFTA and to the concept of NAFTA’s GREEN IMPACT. NAFTA produces positive and negative effects that can contribute to the greening of NAFTA if the negative

<sup>110</sup> The research uncovered no scientific paper that combined all results of the studies of the NAFTA EA and created a complete image of NAFTA’s environmental impacts on the basis of these results.

impacts are decreased and the positive ones increased. The concept of NAFTA's GREEN IMPACT, as one approach to improving the impacts of the trade agreement, can thus also contribute to the greening of NAFTA.

Figure 15: Contributions to greening NAFTA including the concept of NAFTA's GREEN IMPACT

(author's compilation)



#### A) NAFTA provokes negative environmental impacts.

NAFTA created the NAAEC and the CEC and was therefore regarded as the greenest free trade agreement ever signed, although the NAAEC was not explicitly designed to green NAFTA (see Chapter 6). Trade under NAFTA has also been shown to have positive environmental effects in the signatory countries. Despite these positive influences, however, the studies of the NAFTA EA also clearly identify negative environmental effects of NAFTA. These impacts vary in their intensity depending on different criteria such as the sector, region and domestic regulations that they affect (Expert N, CEC 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05, analysis of abstracts), as is apparent in the two case studies (see Chapter 8.2). Furthermore, a detailed analysis of NAFTA's impacts is missing due to limited data availability and a lack of continuity

in the analysis, thus, further negative impacts may exist that have not yet been identified (see Argument D on weaknesses in the analysis).

As NAFTA remains in force, a future increase of trade in the intra-regional context is likely. Hufbauer and Schott (2005: 473) regard the automobile, energy and agriculture sectors as relevant for future trade development under NAFTA. The extension of the NAFTA transportation corridors also suggests that trade under NAFTA is expected to continue to grow (Sierra Club et al. 2000: 3/ Case Study 2 “NAFTA Transportation Corridors,” see Chapter 8.2). A future growth of trade under NAFTA could most likely also increase the negative impacts of trade liberalization, if these procedures are not channeled towards a green or an environmentally neutral process.<sup>111</sup>

**B) The significant trade dependencies among the signatory countries suggest that NAFTA, as the most influential trade agreement for the North American region, needs to be greened.**

Even though all three countries are members of other free trade agreements, the large amount of trade flowing throughout the region (e.g. 824 billion US\$ as identified by WTO (2006) for 2005) demonstrates the economically dominant role of NAFTA in North American trade (see Chapter 5.1.3). Besides the quantity of intra-regional trade, the quantity of trade flow among the countries themselves must also factor into any evaluation of NAFTA’s economic relevance. Both Canada and Mexico are obviously heavily dependent upon US demand (both about 80 %). Furthermore, the US exports approximately half of its trade to its two neighbors (see Chapter 3.1.1, 3.3.1, 3.4). These dependencies clearly demonstrate the need to green NAFTA in order to green trade liberalization within the North American hemisphere. It therefore should be ranked as a first priority on any fictitious list of trade agreements requiring greening, prior to other trade accords that are also relevant for the continent (for example the US-CAFTA-DR and the WTO).<sup>112</sup>

**C) The direct proximity of the NAFTA countries to each other means that negative environmental impacts accumulate in the border areas and affect common ecosystems, natural resources and species.**

The three countries span the entire North American hemisphere and thus share

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<sup>111</sup> Beyond NAFTA, the signatory countries have made further steps towards trilateral integration, for example, through the Security and Prosperity Partnership. A stronger integration, even in political areas not directly linked to NAFTA but rather to trade liberalization or economy in general, might cause an increase in trade by dint of improving political stability within the countries and their mutual cooperation. Further research, however, is needed to verify this (for example, research based on experiences of the trade and integration process of the European Economic Community to the European Union).

<sup>112</sup> This Argument B is based on the idea that large economic effects cause strong environmental impacts. Expert N, however, pointed out, that changes under NAFTA with small economic impacts may also provoke strong environmental impacts (an example would be the legal changes that were required for the domestic implementation of NAFTA). Thus this argument can also be transferred to trade agreements in general: Despite a comparatively small economic impact in North America, trade accords may also provoke strong negative effects. However, these possibilities require further research.

common natural resources, ecosystems and species on the bilateral and trilateral level. The monarch butterfly and the Great Lakes are well-known examples (e.g. CEC 1999c, see Chapter 3.4, Annex I). Any environmental effect of trade in one of the countries - not necessarily in the border areas - may easily affect the neighboring countries also, especially when bilateral or trilateral environmental commons such as air, water and transboundary biotops are impacted (see Chapter 7.2). Impacts occurring in the Mexican Sierra Madre Occidental, for instance, may influence the southern US due to the interacting river system of the two countries (see Chapter 8.2.1/ Case Study 1 “The Forestry Industry in the State of Chihuahua”).

Furthermore, as a result of the proximity of the countries and the heavy Canadian and Mexican dependency on the US as export market, trade within the North American hemisphere has a significant impact on the border areas (see Chapter 3.4). The marked increase in intra-regional trade among the three countries has had “strong environmental impacts in the border areas due to pollution attributable to an increase in transport [...] and a high level of production” (Garver, Podhora 2008: 255) (see Chapter 8.2.1/Case Study 2 “NAFTA Transportation Corridors”).

Due to this extensive regional trade alliance that is intensified through the aforementioned trade dependencies, the greening of NAFTA can be expected to have a positive impact on the environment of the border areas and common natural resources, ecosystems and species, for example aquifers.

**D) Gaps and weaknesses in the analysis of NAFTA’s environmental effects might hide more extensive negative impacts.**

The NAFTA EA used to analyze NAFTA is a quite young instrument that has only been in use for the past decade. NAFTA EA investigates the environmental impacts of the trade agreement through mainly detailed case studies and does not create a complete picture of NAFTA’s environmental effects. In case the studies develop explicit recommendations for greening the trade agreement, these recommendations are made specifically for the respective case studies, and not for the agreement as a whole.

Furthermore, no continuous analysis of the results of the NAFTA EA exists. The analysis presents specific case studies, whose results and conclusions are not absorbed into later studies (abstract analysis CEC 2000: First North American Symposium on Understanding the Linkages between Trade and Environment, id., no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in North America 05, analysis of titles and abstracts). Plagiannakos (2000), for example, concludes in his study “Will Free Trade in Electricity between Canada and the US Improve Environmental Quality” that, as the Clean Air Act Amendments were about to enter into force and further environmental initiatives such as the National Ambient Air Quality Standards were being negotiated, no negative effects on air originating from the US territory would be expected to impact Canada. No NAFTA EA study was conducted as a follow-up to Plagiannakos’ results, however, after these acts and standards came into force (CEC, no date: Trade and Environment in the Americas 2003, id.: Trade and Environment in

North America 05, analysis of titles and abstracts). The lack of continuity in this study therefore limits the validity of its results.

In addition, the methodological approaches to trade impact assessment face certain challenges, for example, the lack of certainty that the impacts are clearly attributable to NAFTA (see Chapter 7.3, Chapter 8.2/ Case Study 1 “The Forestry Industry in the State of Chihuahua”). Some of the studies undoubtedly reveal the narrow scope of the results due to missing data. The limited information impedes attempts to explicitly identify and name the environmental impacts of NAFTA, and may obscure the existence of additional negative impacts. As long as the existence of additional negative environmental impacts cannot be excluded, activities such as greening NAFTA should be promoted in order to decrease the likelihood of extant yet undetected negative environmental effects.

**E) The current lack of activities geared toward the greening of NAFTA reveal a general demand for the greening of the trade agreement.**

Though the NAAEC and its practical implementation address the environment-trade linkage, the NAAEC, its governance levels and the three types of environmental assessment demonstrate practically no momentum toward a green NAFTA (according to the key statement to decrease the negative and increase the positive impacts, see Chapters 2.2, 6.5.4, 7.4.3).

Though the CEC was seen as a means by which trade and environment could be harmonized, experience has proven that the relationship between economy and environment has been poor under NAFTA (see Chapter 6.5.4). The NAAEC is mainly an agreement on trilateral environmental cooperation and was not established in order to green NAFTA. At present, despite its section on “Environment, Trade and Sustainability”, the activities of the CEC are politically quite limited and insufficient to efficiently green NAFTA according to the key statement. Specifically, the political reception of the results of the NAFTA EA and the work of the CEC regarding these results has also been lukewarm (see Chapter 7.3). The uncertainties in the analysis mentioned in the previous paragraph might cause or reinforce this underwhelming political reception to the results of the NAFTA EA, and thereby impede its political implementation even further.

The CEC’s Puebla Declaration also exposes the limited political activities of the Commission with regard to the greening of NAFTA according to the key statement: By dint of this declaration, the countries endeavor to increase understanding of the environment and trade linkages, a commitment that may be interpreted as supporting greening of the NAFTA. It cannot be interpreted, however, as a political commitment to actually work with the results and to apply them towards greening NAFTA, but rather as a scientific attempt to learn about these linkages.

Additionally, some studies of the NAFTA EA suggest that the CEC needs to become explicitly involved in activities that limit the negative environmental impacts of NAFTA or recommend related tasks for the Commission (see Chapter 8.2.1). The Sierra Club of



Canada (2000: 35), describing NAFTA's impacts on the Great Lakes, states in its NAFTA EA study: "As governments, municipalities, industries and individuals in the basin struggle to reconcile their permitted uses of basin waters with the changing trade environment of NAFTA, it will be crucial for the CEC to assist the [sic] in the development of water quantity and quality indicators of environmental health and stress to avoid the negative effects of trade in goods, services and investment, while optimizing the potential for environmental sustainability and quality in the Great Lakes basin."

While the NAFTA EA currently makes a comparatively small contribution to greening NAFTA, the project EIA and SEA for policies, plans and programs presently do not contribute at all; neither by directly fulfilling the requirements of the key statement, nor by supporting the NAFTA EA (see Chapters 7.1.1.4, 7.2.1.4, 7.3.1.4, 7.4.3).

To overcome the weak political will that currently impedes the greening of NAFTA, increased political activity is needed to investigate interactions (a step that would satisfy the first requirement of the key statement criteria on greening trade) and to actually reconcile trade and environment (thus fulfilling requirement 2).<sup>113</sup>

#### **F) Greening NAFTA has positive impacts on the North American environment in general.**

Regional trade agreements are regarded as a good opportunity to increase environmental protection among and within the signatory countries (Altmann 2002: XI, 253 ff). Altmann's analysis supports the assertions made in this dissertation, namely that the NAAEC and the greening of NAFTA can provide environmental support to the North American hemisphere. As the wide regional scope of the NAFTA EA studies shows, NAFTA impacts various environmental media in North America (environmental media based on the Analytic Framework, see Chapter 2.1.2, 7.3.2.2.1):

- air: emissions due to an increase of traffic under NAFTA causes negative environmental impacts on air quality in border cities (Sierra Club et al. 2000, see Chapter 8.2.1/ Case Study 2 "NAFTA Transportation Corridors"),
- water: for example, the impacts on the Great Lakes region due to a change of use of water under NAFTA (Sierra Club of Canada 2000: NAFTA Effects on Water),
- land: changes in land use, for example due to an increase in "[u]rbanization of previously undeveloped land" in Nuevo Laredo/ Laredo (Sierra Club et al. 2000: 46, see Chapter 8.2.1/ Case Study 2 "NAFTA Transportation Corridors"),
- biota: the extensive forests, are – to a limited extent – environmentally negatively impacted due to logging activities conducted under NAFTA (see

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<sup>113</sup> Further research is needed to identify if and to what extent the results of the NAFTA EA are integrated into trilateral and binational activities promoting environmental cooperation under the auspices of the SPP.

Guerrero et al. 2000, see Chapter 8.2.1/ Case Study 1 “The Forestry Industry in the State of Chihuahua”).

Besides referencing environmental media, the studies may also hint at gaps in environmental protection uncovered by their analysis. Sierra Club of Canada (2000: 3), for example, states that “[r]egional water use data are seven years out of date” concerning the Great Lakes, thereby pointing out that not only is reference data missing (see Argument D on weaknesses in the analysis), but also that environmental protection programs lack research continuity. In addition, the results of the NAFTA EA show that environmental impacts can be caused by factors other than the trade agreement, so that the studies may identify areas that might not have been analyzed yet with regard to the source of their environmental impacts or their negative impacts at all (see Chapter 8.2.1/ Case Study 1 “The Forestry Industry in the State of Chihuahua”).

Any reduction in NAFTA’s negative environmental impacts, any increase in positive ones related to environmental media, and any additional information that can be gathered on causes of these impacts besides NAFTA will have positive effects on the North American environment and the interrelationship of its media.

The six arguments presented in the previous paragraphs clearly show that, fifteen years after NAFTA came into force, a green trade agreement is still greatly needed and could produce numerous environmental advantages.

### 8.1.3 Requirements for NAFTA’S GREEN IMPACT

The concept of NAFTA’S GREEN IMPACT will be based on specific requirements in order to link it to (a) the need for a green NAFTA and (b) the different types of environmental assessment (see Chapter 8.2.3). As these six arguments show that the concept of NAFTA’S GREEN IMPACT has to be linked directly and indirectly to the need for a green NAFTA, the following requirements for the concept mainly derive from this demand:

- to identify the green status quo of NAFTA on a broad scale and on an ongoing basis, and as specific reference data (based on Argument A regarding NAFTA’s negative impacts),
- to reduce NAFTA’s known negative environmental impacts and to prevent possible negative environmental impacts that remain undetected due to a lack of reference data or analyses (based on Argument A regarding NAFTA’s negative impacts and Argument D on weaknesses in the analysis),
- to identify positive environmental effects of NAFTA and to increase them in the various environmental media, in order to improve the environmental performance of the trade agreement (based on the key statement for greening NAFTA),
- to closely examine common North American natural resources, ecosystems, species and regions such as the border area, as environmental impacts are likely

to accumulate there or have trilateral effects (based on Argument B regarding trade dependencies and Argument C regarding direct proximity),

- to promote and foster activities geared towards greening the trade agreement (based on Argument E regarding a lack of activities intended to green NAFTA), and therefore
- to have, in sum, positive environmental effects on the North American environment apart from NAFTA (based on Argument F on the North American environment).

In addition, a clear definition of NAFTA-related negative and positive environmental impacts is required. Negative impacts may include, among other things, increases in the amount of toxic materials released into environmental media such as water and air, even within legal limits. Positive impacts can be detected in emissions reduction due to the application of innovative technologies. In terms of trade, these impacts are embedded in a wider context and thus require a more exact definition. Here, capacity-building for NAFTA-related environmental protection related to a project, and the participation of the unit in NAFTA-related environmental domestic and CEC programs, would also be considered a positive impact. In contrast, a regional shift of production from a country with stricter environmental standards to one with more relaxed standards could be regarded as a negative environmental impact, if the standards of the original home country are not met.

These requirements will be related to the different types of environmental assessment in order to describe how the instrument could be adapted and used to fulfill the specifications (see Chapter 8.4).

## **8.2 Reference Frame for Environmental Assessment: The Role of Environmental Assessment in NAFTA's GREEN IMPACT**

This chapter examines the relationship between the various types of environmental assessment and NAFTA. The role and influences that the instrument provides for the concept of NAFTA'S GREEN IMPACT are derived from this relationship.

### **8.2.1 Interactions between Environmental Assessment and NAFTA: Examples from Two Selected NAFTA EA Case Studies**

The concept of NAFTA'S GREEN IMPACT is based on the argument that NAFTA is linked with the three types of environmental assessment. According to the NAAEC and its practical implementation, the most direct link exists between NAFTA EA and NAFTA (see Chapter 7.3). Further links must be identified, however, in order to develop and implement a full cycle of environmental assessment for the greening of NAFTA.

The following sub-chapters illustrate the interaction between the free trade agreement

and the three different types of environmental assessment by dint of examples derived from two selected NAFTA EA studies<sup>114</sup>:

- “The Forestry Industry in the State of Chihuahua: Economic, Ecological and Social Impacts post-NAFTA” (Guerrero et al. 2000) and
- “NAFTA Transportation Corridors: Approaches to Assessing Environmental Impacts and Alternatives” (Sierra Club et al. 2000).

Each link between NAFTA and the type of environmental assessment is related to the domestic procedures of the instrument, in order to describe the distinct national context in which the interaction takes place.

Box 5 summarizes the content of the two case studies according to four aspects. These aspects do not represent any common structure within the studies, but are rather intended to represent the studies’ common informational framework and their general scope:

- the regional focus (see Annex V),
- the sectoral focus with the direct link to NAFTA (sector liberalized by the agreement)/ indirect link to NAFTA (sector influenced, but not liberalized by NAFTA),
- examples of environmental impacts identified through the analysis and presented in its central conclusions, and
- examples of recommendations developed by the authors of the study based on their analyses, concerning the greening of the NAFTA according to the criteria in Chapter 2, the use of the instrument of environmental assessment, and the aspects of multi-level governance based on NAAEC.

The general information provided in the boxes is made more specific in the following sub-chapters, which describe the relation between NAFTA and the different types of environmental assessment. All boxes in this and the subsequent sub-chapters only refer to information presented in the studies.<sup>115</sup>

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<sup>114</sup> For a list of the selection criteria for the two case studies, see Chapter 1.3. There is no hierarchy in the presentation of the studies.

<sup>115</sup> In cases in which the studies do not provide information on all eight aspects concerning links to the different types of environmental assessment, no information has been added through further dissertation research.

## Box 5: General description of the case studies

**Case Study 1: The Forestry Industry in the State of Chihuahua: Economic, Ecological and Social Impacts post-NAFTA** (Guerrero et al. 2000)**The regional focus**

The analysis focuses on the Sierra Madre Occidental,<sup>116</sup> a region of the northern Mexican border state of Chihuahua. The Sierra covers about one fourth of the state. It is “considered one of the most biodiverse regions of the North American continent” (id.: 7) and has important natural resources such as forests, minerals and water. Its stable waterways due to its forest system make the region extremely hydrologically important. Furthermore, it encompasses cultural habitats and is home to many indigenous groups.

**The sectoral focus**

Guerrero et al. assess a wide range of impacts attributable to the forestry and forestry production sector, covering loggins, saw mills, plywood and pulp and paper products. The whole state of Chihuahua and the Sierra are vitally important to Mexican wood production.

Though tariffs in the forestry sector were already low (zero or almost zero in Canada and the US, mainly between 0-15 % in Mexico), they were completely liberalized under NAFTA until 2003. “NAFTA tariff reductions are most significant for wood and wood products imported into Mexico” (id.: 19), including products such as softwood lumber, wood pulp and paper. Between 1993 and 1999, Mexico’s exports of forest products increased by 164% and imports by 117%, whereof the greatest percentage was with the US rather than Canada (between 84 and 96% of wood and wood products as export to the US).

The authors also take socio-cultural elements such as the traditional indigenous system and their types of land ownership into account, in relation to the forestry and wood production sector.

**Examples of environmental impacts and conclusions** (see Chapter 8.2.1.4)

The study reaches various conclusions corresponding to different sectors of the analysis.

In total, wood production and the forestry production industry in Chihuahua have grown significantly since 1994. This development is reflected, among other indicators, in the sharp increase in construction of sawmills, but also of illegal loggins.

The changes in the Sierra that have occurred since NAFTA came into effect have caused environmental and social problems in terms of an increase in poverty, illegal loggings and an increase in traffic. A majority of the environmental complaints were

<sup>116</sup> Also called “Sierra Tarahumara.”

submitted domestically and concerned the effective enforcement of Mexican environmental regulations.

The activities in the forestry sector stem from various sources such as changes in domestic regulations, which cannot be exclusively linked to NAFTA: “It should be noted, however, that none of these factors is necessarily unrelated to NAFTA” (id.: 73). The study emphasizes the lack of reference and research data that would allow for a more effective comparison, and notes that “[c]omprehensive studies of the Sierra Tarahumara forests are generally lacking” (id.: 68) as well as studies of the impacts of logging activities since NAFTA came into effect: “The absence of this information makes it exceedingly difficult to quantify—either with respect to scope or location—the degree to which changes in forest harvesting and production patterns have affected the forest and other natural resources” (id.: 72).

For the future, the authors expect that the sharp increase in imports and resultant increase in competition will put the Mexican forest industry under pressure. It is assumed that this pressure will lead Mexican industries to circumvent legal regulations, an assumption that seems valid given the large number of environmental complaints in the region.

### **Examples of recommendations**

Guerrero et al. neither develop recommendations concerning the decrease of negative environmental impacts and the increase of positive ones, nor do they suggest any tasks for the governmental levels relevant in the NAAEC. The authors stress, however, that environmental assessment should be integrated in a domestic and transboundary context as a support provided by the NAAEC to the activities realized in the Sierra.

## **NAFTA Transportation Corridors: Approaches to Assessing Environmental Impacts and Alternatives** (Sierra Club et al. 2000)

### **The regional focus**

Sierra Club et al. analyze the changes in the transportation sector under NAFTA by focusing on the “transboundary border regions” (id.: 1) and using the cities of Windsor (Canada)/ Detroit (US) and Laredo (US)/ Nuevo Laredo (Mexico) as examples.

### **The sectoral focus**

Since NAFTA came into force, traffic via various transportation modes increased exponentially, though this sector is not directly liberalized under the trade agreement. This increase was mainly due to a shift in distribution and production patterns in the North American hemisphere, which generated the NAFTA transportation corridors. These corridors “comprise the transportation infrastructure and systems that facilitate the flow of traffic both domestically and across the North American borders, particularly those traffic flows prompted by the trade liberalization of NAFTA” (id.:

3).

### **Examples of environmental impacts and conclusions** (see Chapter 8.2.1.4)

This traffic increase highly impacts the border regions; a case in point is the border crossing in Detroit/ Windsor, where the traffic volume jumped by 71% between 1994 and 1998.

The analysis concludes that the shift to truck transportation as transport medium puts pressure on certain areas and environmental media.<sup>117</sup> The air quality, for example, is impacted by a high level of particulate matters and ozone concentration. The lack of city planning in Laredo threatens wildlife species. The noise and emissions of trucks cause health problems, as the trucks accidentally cross residential areas due to insufficient signage. The effect of combustion toxins and other air-borne pollutants on water quality, however, requires further analysis.

### **Examples of recommendations**

Sierra Club et al. develop recommendations for the CEC's work on the traffic topic. They suggest, for example, "investigat[ing] the transportation decision-making process used in each of the three countries, [and] identifying those forces or pressures that support or oppose intermodal transportation resources and networks" (id.: 28). Furthermore, the CEC – in close cooperation with stakeholders – should forge an agreement that requires the application of these CEC activities in the development of the concept of NAFTA's transportation corridors. Furthermore, the CEC is asked to "[p]romote the Availability of, Public Access to, and Usefulness of Environmental Data" (id.: 31), for example, by extending the CEC database and creating standards for data collection. In addition to these suggestions, the authors recommend collecting specific data on air pollution "for each city and region located along major NAFTA trade corridors" (id.: 33) and creating best-practice examples concerning biota.

The two case studies were prepared by the respective author groups independently from each other, without any amalgamation of their results, either in the year 2000 – when they were both conducted – or in 2003 and 2005, when the NAFTA EA studies were developed (CEC, no date: *Trade and Environment in the Americas 2003*, id.: *Trade and Environment in North America 05*, analysis of abstracts). Some of their results, however, may be linked, as they address the same environmental media in the same region: Both studies, for example, identify impacts on the Rio Grande within their respective sectors and activities (see Chapter 8.2.1.2).

<sup>117</sup> The study states that the "Environmental and Data Assessment" of the study was based on "[t]he Community-level 'Report Card'" (id.: 28). As this card was not available on the homepage of the CEC Symposium 2000, the dissertation did not regard it as a standard part of this NAFTA EA study.

### 8.2.1.1 Project EIA and NAFTA

Domestic environmental assessment, and within the context of the dissertation, project EIA, are part of the General Commitments of the NAAEC, Article 2.1(e). The article makes no reference to interactions between NAFTA and the domestic self-commitment to environmental assessment (see Chapter 7.1.1.4). The two case studies from the NAFTA EA, however, clearly show an interaction between NAFTA and project EIA, and thereby substantiate Argument A on NAFTA's negative impacts as a rationale for greening NAFTA. The central point of discussion is the increasing trade between the three signatory countries and the resultant increase in projects that are directly or indirectly linked to NAFTA. This relation is illustrated in Box 6.

Box 6: The interrelationship of project EIA and NAFTA – Examples from the NAFTA EA studies

(author's compilation)

#### **Case Study 1: The Forestry Industry in the State of Chihuahua**

Since NAFTA came into force, the Sierra Madre Occidental experienced a jump in the number of saw mills, from 108 in 1993 to 309 mills in 1998. This jump, however, seems to be only partly linked to NAFTA.

This assessment suffers from gaps in its analysis, however. First, the study states that vital reference data is missing. Second, the liberalization process of the forestry sector was only completed in 2003, implying that the study of the year 2000 does not necessarily cover impacts that might have occurred only upon completion of the process. An interaction between NAFTA liberalization and further domestic policy changes could produce a further increase in projects related to NAFTA (see Chapter 8.2.1.3).

#### **Case Study 2: NAFTA Transportation Corridors**

The study offers some direct and indirect examples of new project activities. It cites, among other activities, an "Environmental Assessment for a construction project on the US side of the Ambassador Bridge," (Sierra Club et al. 2000: 24) thus confirming that NAFTA produces projects requiring an environmental impact assessment on the domestic level. The huge increase in general construction due to the trade agreement is also reflected in the following observation: "The fact that nothing man-made existed five years ago where these structures now stretch out of sight illustrates how the growth of NAFTA trade has affected the city [of Laredo]" (Gordetsky 2000: 20 as quoted in Sierra Club 2000: 23).

As the existing infrastructure is not always capable of dealing with this amount of traffic, the construction, operation and maintenance of roads and the disposal of



vehicles are important and relevant activities. The study refers to an international bridge to be opened in 2000<sup>118</sup> and other proposed activities such as a second railroad bridge (both projects in Laredo).

Beyond a review of the recent transportation challenges stemming from NAFTA, the study also cites existing proposals for the creation of the so-called “NAFTA Trade Corridors” as an extended transportation concept for trade under NAFTA (see Chapter 8.2.1.3) for as long as the agreement stays in force. These proposals focus in part on the “construction of new transboundary highway systems with connecting overlays to existing roads (e.g., the I-69 route), thereby linking additional centers of trade and manufacturing throughout the three nations” (Sierra Club 2000: 3). They also include the construction of “major infrastructure facilities” (such as new bridges at border crossings) and a proposal to “upgrade and expand heavily-traveled segments [...] to accommodate trade traffic” (id.) (for instance, lanes of the Interstate 35 Laredo – Dallas/Texas).

Although the study barely mentions projects directly related to the future trade corridors, these proposals clearly show that the ongoing demands made on the NAFTA trade corridors go hand-in-hand with the construction of new projects.

### **Relation to the EIA of the nation states**

Mexico, as the country under investigation in Case Study 1 on the Sierra Madre Occidental, includes several projects and activities that are related to the case study in its federal project list: mainly the exploration of certain types of forestry (Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental 2000: Art. 5 L(II), N, Ñ), change in land use in forested areas (id.: Art. 5 O) and the paper industry (id.: Art. 5 H). Furthermore, in its state environmental law, Chihuahua requires an EIA for the exploitation of any natural resource that is not part of the Mexican federal General Law, and for industrial zones in general (Ley de Equilibrio Ecológico y al Protección al Ambiente del Estado de Chihuahua 2005: Art. 42 III). It is likely that these two legal requirements interact closely with activities related to the forestry sector and the industrial activities that are realized in and close to the Sierra Madre Occidental.

In contrast to the case study on Mexico, the second case study on the transportation sector relates to all three domestic procedures on environmental assessment, on the federal as well as on the subnational level. Despite national differences in their project EIA rules, all NAFTA countries address the transportation sector in their regulations. Canada lists transportation projects, for example, in its Inclusion List Regulations (Inclusion List Regulations (SOR/94-637): Part V). In the US, NEPA-related regulations for the Federal Highway Administration (FHWA) and the Federal Transit

<sup>118</sup> Here, the author of the dissertation assumes that the bridge was constructed due to a NAFTA-induced increase in transportation after the agreement entered into force, though the study does not explicitly confirm this assumption.

Administration (FTA) administer “processing of highway and public transportation projects” (Title 23: Highways, Part 771 – Environmental Impact and related procedures). Mexico includes the EIA of highways in its project list (Reglamento de la Ley General del Equilibrio Ecológico y la Protección al Ambiente en Materia de Evaluación del Impacto Ambiental 2000: Art. 5 B).

Beyond the responsibilities of the federal level, the extensive scope of the NAFTA transportation corridors may also include the subnational level – for example, country roads as access roads. Responsibility for these roads could also fall to the subnational level, for instance, to the Chihuahua state environmental law in Mexico (Ley de Equilibrio Ecológico y al Protección al Ambiente del Estado de Chihuahua 2005: Art. 42 II), the Federal/Provincial Environmental Assessment Coordination in Ontario (Ministry of the Environment 2007: D-1<sup>119</sup>) and in Texas, USA, to the Department of Transportation for state highway improvement projects (CEC 1998: 54).

These results clearly demonstrate that the environmental impacts caused by NAFTA are the common responsibility of both the federal and the subnational levels.

### 8.2.1.2 Transboundary EIA and NAFTA

Transboundary EIA is part of the Council Functions in NAAEC’s Article 10.7. The detailed description of the instrument and of its implementation in the NAAEC does not allude to any interaction between transboundary EIA and NAFTA (see Chapter 7.2.1.4). The reasons for connecting transboundary EIA and NAFTA, however, are obvious and are mainly related to Arguments B on trade dependencies and C on proximity, both of which reinforce the rationale for greening NAFTA.

As one of the consequences of free trade, Altmann (2002: XVI f) pinpoints as “[p]otential **areas of conflict** between trade and the environment,” particularly as “areas in which there are different environmental standards between the partners, not for reasons of natural circumstance, but because of human influence (or because of both): [...] *Cross-border environmental pollution*, especially by emissions of pollutant into rivers and the air.” The three NAFTA countries share natural resources bilaterally as well as trilaterally, among them airsheds, watersheds, aquifers and protected areas. Bilaterally speaking, the immediate border areas are highly impacted by NAFTA, due to the proximity of the NAFTA countries and the trade dependencies of Canada and Mexico on the US as a common neighbor. The impact is traceable to different sources; for example, to increased transportation rates, a high level of production from the industry located in the area, and migration to the Northern Mexican border due to expected

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<sup>119</sup> During this research it could not be determined whether or not Ontario has a provincial inclusion list for environmental assessment similar to the Canadian federal one. However, the Ministry of the Environment/ Canadian Environmental Assessment Agency Ontario Region (2007: D-1) lists the Ministry of Transportation (MTO) with “Provincial Transportation Facilities” in its current list of provincial class environmental assessments; this information is taken as proof that the Canadian subnational level is included in transportation projects.

employment opportunities. Trilaterally speaking, NAFTA effects in one of the signatory countries may easily impact species of trinational concern such as the monarch butterfly (see Chapter 3.4, Annex I).

The content of Box 7 proves the relationship between transboundary EIA and NAFTA.

Box 7: The relation of transboundary EIA and NAFTA – Examples from the NAFTA EA studies

(author's compilation)

#### **Case Study 1: The Forestry Industry in the State of Chihuahua**

Besides describing the various environmental impacts in the Sierra Madre Occidental, a part of the analysis also highlights the transnational interactions of ecosystems between Mexico and the US. The study clearly refers to transboundary impacts on water courses and the US American national park Big Bend due to forestry-related activities: “[...] the headwaters of the Fuerte and Sinaloa Rivers, which flow west into Sinaloa; and headwaters of the Conchos River, which flows north to join the Rio Grande just upstream of Big Bend National Park. Much of the farming that occurs in Texas [US], Coahuila, Nuevo León and Tamaulipas [Mexico]—as well farming in the Conchos basin itself—depends heavily on the flow Conchos River and, consequently, upon what happens in the Sierra Madre” (2000: 7). The study does not provide any details about the impacts on US territory (for example, details concerning the type and quantity of impacts).

The study explicitly refers to transboundary EIA as part of the NAAEC, which should be applied to large-scale projects in the forestry sector.

#### **Case Study 2: NAFTA Transportation Corridors**

The study mentions several specific transborder projects, such as the fourth international bridge in Laredo that was opened in April 2000. It also describes future plans for the construction of a second railroad bridge between Laredo/ Nuevo Laredo, in order to reduce traffic pressure on the high-volume points. It is likely that these transborder projects cause transboundary impacts, as they may span territory in both countries and require a domestic EIA in both countries as well.<sup>120</sup>

### **Transboundary EIA in relation to the nation states and in relation to the Draft Agreement on Transboundary EIA**

As the Canadian, the US and Mexican federal levels include transportation projects, this type of project, analyzed in Case Study 2 on transportation, is also part of a possible transboundary EIA. Similarly, the impacts caused by projects in the forestry sector in

<sup>120</sup> The Bridge over the Danube River between Vidin (Bulgaria) and Calafat (Romania) is an example of the application of the Espoo Convention (UNECE, no date: Bridge over the Danube River between Vidin (Bulgaria) and Calafat (Romania)).

Case Study 1 are also Mexico's federal responsibility. Those parts of the EIA that the subnational level would usually conduct would then be shifted to the federal level, as these forestry-related activities cause impacts in the US and thereby transboundary impacts (see Chapter 4.1, 4.2).

Regarding the existing approach to a trilateral agreement on transboundary EIA, one finds both sectors included in the draft accord, which lists transportation projects (Item I) and forestry projects (Item H). In addition, the draft includes industrial projects in general (Item A), possibly also encompassing industrial use of forestry products (CEC, no date: Publication and Information Resources – Draft North American Agreement on Transboundary Environmental Impact Assessment, Appendix I).

### 8.2.1.3 SEA for Policies, Plans and Programs and NAFTA, including transboundary Aspects

Just as with the project EIA, the integration of the SEA for policies, plans and programs into the concept is also drawn from NAAEC Article 2.1(e) on domestic self-commitment. Since the Article does not suggest an interaction with NAFTA (see Chapter 7.1.1.4), no direct link is established between types of SEA and NAFTA.

In the liberalization process of NAFTA, direct and indirect changes occur within different sectors, regions and programs, thus covering the three distinct aspects of SEA. The forestry sector is liberalized directly via NAFTA, whereas the effects on transportation emerge as a result of the liberalization process. Both aspects, however, are integrated into domestic policy decisions. Trade liberalization may also require or lead to the implementation of supplementary programs. NAFTA increased economic activities in certain areas, for example the border area (see Chapter 3.4), that would benefit from a SEA concerning the regional scope of the analysis (see especially Argument A on NAFTA's negative impacts as part of the rationale for greening NAFTA).

Box 8 illustrates interactions between NAFTA and the various aspects of SEA.

Box 8: SEA for Policies, Plans and Programs and NAFTA – Examples from the NAFTA EA studies

(author's compilation)

#### **Case Study 1: The Forestry Industry in the State of Chihuahua**

The study clearly describes the impacts in the region of the Sierra Madre Occidental, a subunit of the state of Chihuahua. The important cultural and natural features of the area, as well as its biodiversity, necessitate special planning: either a general spatial or development plan, or a sectoral forestal plan. A special NAFTA-related forestry plan is also plausible, given the significance of Chihuahua in terms of forestry exports.

The study refers to two different types of policies. On the one hand, the study states

that “there has been significant consolidation of the forest and forest products industries” (id.: 73). On the other hand, the reform of the Mexican Constitution (Article 27) “primarily in anticipation of NAFTA” (id.: 8) altered, among other things, the traditional ownership structure of land and thus of the forests. Additional domestic programs were implemented in order “to regulate and encourage forestry production” (id.: 14); a case in point is the Forestry Law, which precipitated changes in the Program for Forest Development that prevented subsidies. These reforms could be part of a SEA with a focus on the policy and law sector and its interaction with NAFTA.

### **Case Study 2: NAFTA Transportation Corridors**

The study refers to the recent and future creation of transportation corridors in response to NAFTA. The high traffic volume, especially in border areas and particular border crossings, could necessitate special regional planning for these areas. A shared increase in transportation routes crossing the North American hemisphere, and/ or a common North American concept of NAFTA transportation corridors, is or could be a part of domestic, but also of transboundary – binational as well as trinational – regional planning. Initiatives working towards a transportation network plan could require a SEA to determine its regional scope.<sup>121</sup>

The study does not address domestic changes on policies or programs related to NAFTA and the traffic sector.

### **Relation to the SEA for policies, plans and programs of the nation states**

Since Case Study 1 mainly involves spatial planning rather than policies and programs, Mexico’s approaches to SEA could be applied. Local and state authorities responsible for the region Sierra Madre Occidental could submit a development plan to the federal authority, the environmental ministry SEMARNAT, for an analysis of the environmental impacts of the plan. Spatial planning could cover the complete Sierra region, a sectoral development such as forestry or water, or a specific subarea such as a tourist area.<sup>122</sup> Similar plans, also incorporating the Sierra region, could be developed on the Chihuahua state level. A federal SEA could also analyze policies and programs related to the forestry sector such as subsidy programs and forest management approaches, although presently no analytic approaches exist.

In Case Study 2, the countries focused on the policy, plan and program aspects of a SEA that is related to the transportation sector and thus could be applied in all three countries. Based on the present domestic system, Canada and the US could focus on the

<sup>121</sup> Reference to the SEA on the regional aspects of the transportation sector are found in, for instance, German approaches to the Strategic Environmental Assessment of the Federal Transport Network Plan (Köppel et al. 2004b).

<sup>122</sup> Further research is required to identify the existing approaches to spatial and sectoral planning in the Sierra Madre Occidental, as well as to forestry planning on the state level, and their relation to NAFTA.

policy of the sector. Mexico's approach would possibly be concentrated more on the development of a federal and state transport network plan than on a strategic transportation policy and program activity.

### **Relation to the possible transboundary and common SEA for policies, plans and programs**

Several activities realized in the Sierra also have transboundary impacts due to the intricate interaction of the regional ecosystem with ecosystems in the southern US. The respective spatial plan related to Case Study 1 would, therefore, be evaluated by the federal authority, SEMARNAT.

In Case Study 2, the international and shared dimensions of the instrument become apparent, as well as the components of a transboundary SEA. The concept of the NAFTA transportation corridors includes both policy as well as regional development on a trilateral basis. It therefore calls for a transboundary SEA concerning domestic activities and planning on the domestic level, but also requires common development strategies and regional planning. It would thus offer a solid basis upon which to develop a concept of transboundary and shared SEA.

#### **8.2.1.4 NAFTA EA and NAFTA**

Regarding the three different types of environmental assessment, the NAFTA EA has the strongest interaction with NAFTA. Article 10.6 of the NAAEC, central to the ex-post assessment of the free trade agreement, implies that NAFTA's ecological goals may be reached by analyzing NAFTA's impact on the environment. The impacts identified in the studies were already presented in Chapter 8.2.1, Box 5, in item "Examples for environmental impacts and conclusions."

### **Relation to the ex-post NAFTA EA in the nation states**

Regarding the interaction between the NAFTA EA and the nation states, no clear link can be found, as none of the three countries performs an ongoing environmental assessment of NAFTA on a federal and subfederal level. Furthermore, neither Canada nor the US relates the results of the ongoing NAFTA EA to its domestic ex-ante analysis of NAFTA (see Chapter 7.3, 7.4.1).

**In sum**, the case studies show a relationship between NAFTA and the projects, policies, plans, programs and NAFTA activities that require different types of environmental assessment due to their impacts on different governmental levels.

## **8.2.2 Structural Interaction of Environmental Assessment**

Gibson (1993, as cited in Wood 2003: 11) summarizes eight basic principles for evaluating EIA processes, two of which are central to the concept of NAFTA's GREEN IMPACT:

"1. An effective environmental assessment process must encourage an integrated

approach to the broad range of environmental considerations and be dedicated to achieving and maintaining local, national and global sustainability. [...]

8. The process must include provisions for linking assessment work into a larger regime including the setting of overall biophysical and socioeconomic objectives and the management and regulation of existing as well as proposed new activities.”

The first principle refers to the various governmental levels where environmental assessment is employed. It emphasizes the necessity of integrating multi-level governance into the concept of NAFTA’S GREEN IMPACT. The eighth principle stresses the necessity of linking environmental to socioeconomic aspects, relating NAFTA as an economic agreement to its environmental aspects and thus strengthening the concept.

Three different levels of interaction between environmental assessment and NAFTA are related to the concept of NAFTA’S GREEN IMPACT:

**1) the interaction between NAFTA and the various types of environmental assessment as part of the NAAEC, including their practical implementation**

The analysis in Chapter 7 reveals the substantial lack of interaction between NAFTA and the various types of environmental assessment. The most direct relationship exists between NAFTA EA and NAFTA, as this type of environmental assessment clearly has links to NAFTA through its analysis and practical application, though it still lacks any relationship with the trade agreement in terms of implementing assessment results and greening the accord. Neither project EIA, nor transboundary EIA nor SEA are designed to interact with NAFTA, and thus their application is not linked to NAFTA.

**2) the interaction between ex-ante environmental assessment (project EIA, transboundary EIA, SEA for policies, plans and programs) and ex-post environmental assessment (NAFTA EA)**

The analysis of the studies of the NAFTA EA reveals a lack of interaction between ex-ante and ex-post assessment. None of the two case studies explicitly refers to data gathered during a domestic ex-ante environmental assessment of projects, policies, plans and programs.

The legal background, in terms of NAAEC and domestic regulations, does not establish any links between domestic ex-ante assessment and NAFTA ex-post assessment. Monitoring is also not included in the draft accord of transboundary EIA – admittedly not yet completely defined – so that it is not possible to draw a relationship between the transboundary EIA and the ongoing assessment of the NAFTA EA. The Analytic Framework, furthermore, as a broader guideline for the ex-post NAFTA EA, does not explicitly identify any ex-ante parts of the instrument as a supporting analytic tool for examining NAFTA’s environmental impacts.

**3) the interaction between the impact of NAFTA and the domestic project EIA, transboundary EIA and SEA for policies, plans and programs**

The research identified no relationship with NAFTA as a free trade agreement in the domestic legislation on project EIA or SEA in a national and transboundary context, as

the description in Chapter 3 – partly in combination with the analysis in Chapter 7 – demonstrates. The existing ex-ante approaches to SEA for trade agreements established in Canada and the US are not applicable, either: Both countries only conduct ex-ante studies that are not transferrable to NAFTA, as NAFTA has already come into force and will presumably not be re-negotiated in the near future.

Despite these political and legal gaps on the domestic and international level, the case studies in the previous sub-chapter proved that there are relationships between NAFTA and project EIA, transboundary EIA and SEA for policies, plans and programs upon which the concept of NAFTA'S GREEN IMPACT can build.

The following refers to the EC Handbook for Trade Sustainability Impact Assessment (2006: 18) as a scientifically accepted ex-ante approach to trade assessment:

“The preliminary overview [prior to the detailed Trade Sustainability Impact Assessment] may suggest the need for a detailed sector analysis which would include:

Quantitative and qualitative assessments of the impact of potential outcomes in the sector concerned. This work should be based on case studies and economic, social and environmental analysis (including environmental impact assessments), use appropriate methodology, measures and indicators, and make use of both qualitative and quantitative techniques as appropriate. Impacts should be differentiated as far as possible as between EU regions” (underlined by author).

### 8.2.3 Adaptation of Environmental Assessment

At present, the instrument of environmental assessment on the project and strategic level mainly attempts to identify the negative environmental impacts that the project, policy, plan or program will most likely produce (see Chapter 4). Based on this evaluation, mitigation measures are developed in order to reduce the environmental impacts of the respective activity. The NAFTA EA goes a step further, as it is intended to identify the negative and the positive impacts of the trade agreement (see Chapter 7.3) and to develop not only mitigation measures but also amplification measures for the positive impacts.

The identification of the positive impacts plays a central role in the concept of NAFTA'S GREEN IMPACT, which is an analytic, adaptation and monitoring cycle, not an analytic, mitigation and monitoring cycle. Thus, in order to fulfill their role in the concept of NAFTA'S GREEN IMPACT, the analyses conducted through project EIA and SEA in a domestic and transboundary context must be expanded to embrace positive impacts.

### 8.2.4 Requirements for NAFTA'S GREEN IMPACT

The relationship between environmental assessment and NAFTA demonstrated in the case studies illustrates the strong connection between trade liberalization and the type of environmental assessment used in each instance. Therefore, the various types of the instrument must be linked to greening NAFTA.

The concept of NAFTA'S GREEN IMPACT thus entails

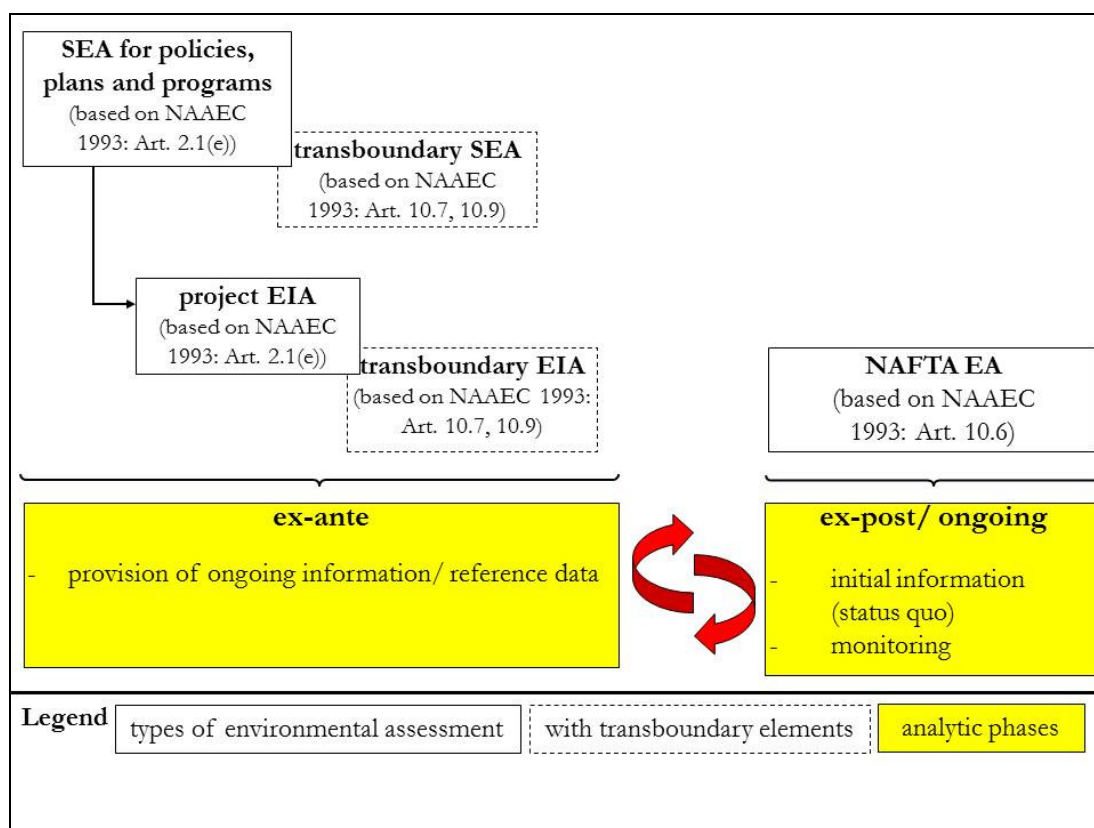


- a) linking the various forms of environmental assessment included in the NAAEC in order to create a complete analytic, adaptation and monitoring cycle,
- b) linking environmental assessment to the ongoing NAFTA liberalization process,
- c) creating a mandatory common structure for the studies of the NAFTA EA (partly based on the general comments of Expert J, see Chapter 7.3.2.1.2, 7.3.4),
- d) implementing an effective monitoring mechanism for the results (based on the general comments of Expert I),
- e) streamlining domestic EIA, transboundary EIA and the NAFTA EA (based on the general comments of Expert J) towards the goal of greening NAFTA, and
- f) extending the types of ex-ante environmental assessment to include positive impacts, and increasing these impacts via amplification measures.

Figure 16 presents the required links referred to in item (a), while the links to the NAFTA analysis are further illustrated in Figure 17.

Figure 16: Environmental assessment in the concept of NAFTA'S GREEN IMPACT in relation to the NAAEC

(author's compilation)



The concept of NAFTA'S GREEN IMPACT is based on the interaction of ex-ante and ex-post environmental assessment – as illustrated by the red arrows in the figure – in order to create a complete analytic, adaptation and monitoring cycle. The interplay between

ex-ante types of assessment, including the project and transboundary EIA and the SEA for policies, plans and programs, and the ex-post type of assessment such as NAFTA EA, is central to the concept. The ex-ante and ex-post types of assessment provide information that will later be mutually monitored – ex-ante inspecting ex-post and vice versa – thereby creating an opportunity to adapt projects, policies, plans and programs toward greening NAFTA. The existing ex-post analysis provides an initial frame of reference for the upcoming ex-ante assessments. The results of the ex-ante assessments are compared to these results and provide, in turn, information to the ongoing ex-post assessment. These steps kickstart a continuous cycle of information that helps improve NAFTA's environmental performance.

The ex-ante assessment consists of two main parts. The SEA for policies, plans and programs provides the wider frame of reference, presenting an environmental analysis of initiatives such as policies and programs on the one hand and spatial development on the other. The project EIA is a sub-activity of environmental assessment, as a broader analysis already takes place on the policy, program or spatial level. The transboundary EIA and SEA are thereby seen as possible sub-elements of their respective types of assessment.

Within this concept of NAFTA'S GREEN IMPACT, the interaction between the ex-ante and the ex-post assessment is crucial. The interaction within the analytic, adaptation and monitoring cycle is designed to propel the process forward, towards greening NAFTA (see Figure 17).

### **8.3 Multi-level Governance as Frame of Reference: The Role of Multi-level Governance in the Concept of NAFTA'S GREEN IMPACT**

Multi-level governance plays a central role in the concept of NAFTA'S GREEN IMPACT. It is a vital support for all steps of the concept, since environmental assessment as well as greening NAFTA are linked to all of the various governance levels (see Chapters 6 and 7). The main tasks of each step are assigned to a lead level, while the other levels play a supportive role to these tasks.

Table 14 presents the multi-level governance as a frame of reference for the concept of NAFTA'S GREEN IMPACT. This framework mixes the opportunities provided by type II and the semi-type, selecting relevant aspects of both types.

#### **8.3.1 Multi-level Governance in the NAAEC as a basis for NAFTA'S GREEN IMPACT**

The analysis of multi-level governance identified two key characteristics of the NAAEC and environmental assessment as part of the NAAEC (see Chapters 6.5.3 and 7.4.2):

- 1) The NAAEC is connected to multi-level governance type II and the semi-type via the four topics of multi-level governance according to Marks and Hooghe: (a) type of jurisdiction, (b) membership, (c) level of jurisdiction and (d) design.

2) The three types of environmental assessment demonstrate characteristics of multi-level governance type I and II, but partly also of the semi-type.

In sum, the NAAEC provides a general background for a flexible application of the different tasks, including the types of environmental assessment. This flexibility, based on the **semi-type**, opens many opportunities for creating new tasks related to the concept of NAFTA'S GREEN IMPACT, but also for streamlining existing activities and instruments with the concept, so as to join the types of environmental assessment to it.

The primary reason for choosing the semi-type is the fact that it permits flexible implementation of elements that are not necessarily included in the rather fixed NAAEC. This type includes a higher level of flexibility, an explicit focus on selected tasks, and a regional and international focus, despite the somewhat strict and comparatively narrow framework set out by the NAAEC. Table 14 provides an overview of the reference to multi-level governance within the concept of NAFTA'S GREEN IMPACT.

Table 14: Multi-level governance in the NAAEC as a support for the concept of NAFTA'S GREEN IMPACT based on the semi-type  
(author's compilation)

Topic	Semi-type in relation to NAFTA'S GREEN IMPACT
(a) type of jurisdiction	<p><b><i>Specific tasks following a general purpose of the NAAEC approved by the Council:</i></b></p> <ul style="list-style-type: none"> <li>- The NAAEC, with a general environmental scope, may assign the CEC specific tasks to support the environmental objectives of NAFTA (Art. 10.6), which can be fulfilled through different approaches, for example, through the NAFTA'S GREEN IMPACT.</li> <li>- This wide scope of the NAAEC also allows the CEC to assume the roles assigned to its level in NAFTA'S GREEN IMPACT (e.g. NAAEC 1993: Art. 10.9).</li> </ul>
<p>(b) membership</p> <ul style="list-style-type: none"> <li>- horizontal</li> <li>- vertical</li> <li>- intermediary</li> </ul>	<p><b><i>Semi-intersecting between selected levels depending on the legal framework and the practical implementation:</i></b></p> <ul style="list-style-type: none"> <li>- The membership is vertically intersecting between the CEC – national level – regional level and is supported by the intermediary level in NAFTA'S GREEN IMPACT (non-governmental level).</li> <li>- The membership is horizontally intersecting on the national, subnational and regional level in NAFTA'S GREEN IMPACT, also supported by the intermediary level (non-governmental level).</li> </ul>

<b>(c) level of jurisdiction</b> - inter-governmental - national - regional - non-governmental	<b><i>Originally limited number of levels, integrating an unlimited number of levels upon practical implementation:</i></b> The number of levels, while limited in NAFTA'S GREEN IMPACT, can be extended during the development, application and extension of the concept.
<b>Topic</b>	<b>Semi-type in relation to NAFTA'S GREEN IMPACT</b>
<b>(d) design</b> - legal - practical	<b><i>A fixed background allows for flexible application:</i></b> The fixed NAAEC allows for the development and implementation of the concept of NAFTA'S GREEN IMPACT under the auspices of the NAAEC.

**(a) Type of jurisdiction: *specific tasks following a general purpose of the NAAEC approved by the Council***

Given that its objectives are general environmental cooperation and the engagement with specific topics on environment-trade links and environmental assessment, the NAAEC provides a wide range of opportunities for greening NAFTA based on the CEC working program and the Council's approval. Thus the CEC developed its working section on "Environment, Trade and Sustainability," which could potentially incorporate the concept of NAFTA'S GREEN IMPACT. It could specifically include the different jurisdictional levels as well as the instrument of environmental assessment: The concept requires extending the existing specifications for environmental assessment by linking the instrument to the greening of NAFTA. This focus constitutes a central contribution to the greening of NAFTA.

**(b) Membership: *semi-intersecting between selected levels depending on the legal framework and the practical implementation***

The concept of NAFTA'S GREEN IMPACT builds on the intersection of the governmental levels. More exactly, the concept requires a vertical intersection between the CEC on the international level and then responsible federal and subnational as national and the regional authorities. The vertical intersection is mainly based on voluntary participation, but additional support can be found in the intermediary level, where positive voluntary cooperation – public participation and memorandi of understanding – could also take place. Here, the similarities between the non-governmental level and the intermediary level (topic (c), levels of jurisdiction) become especially obvious, as they perform the same supportive role to all the various governmental levels.

An intersection on the international horizontal level is mainly useful for the CEC and the environment-related working groups created under NAFTA. It is less important in the concept, however, as the concept is founded upon voluntary participation and self-commitment – apart from an intersection between NAAEC and NAFTA and the CEC and the Free Trade Commission. No intersection is required among the elements of the concept of NAFTA'S GREEN IMPACT and the Security and Prosperity Partnership,

although the Partnership might provide some additional support.

Additionally, the horizontal national level – mainly the federal, but possibly also the subnational level – serves as a valuable support, as it links the domestic approaches that relate to the concept.

In the horizontal, vertical and intermediate level, a strong intersection of the membership is the basis for an effective cooperation. These intersections strengthen the concept of NAFTA'S GREEN IMPACT by elaborating upon and supporting certain activities on different levels, creating a stable net for the concept. These intersections of the membership put a spotlight on the opportunities for greening NAFTA that the instrument of environmental assessment affords.

**(c) Level of jurisdiction: *originally limited number of levels, integrating an unlimited number of levels upon practical implementation:***

The concept of NAFTA'S GREEN IMPACT first refers to a rather limited number of levels – intergovernmental, national, regional and non-governmental. This list, however, can be extended freely, especially by adding more dimensions to the intermediary level and by further specifying the existing ones. The extension could include:

- intergovernmental level:
  - creation of specific working groups on the concept in the CEC: for example, groups focused on the interaction between the concept of NAFTA'S GREEN IMPACT and the CEC section on “Environment, Trade and Sustainability,”
  - integration of environmentally-related working groups of the Free Trade Commission into the concept, to identify opportunities for support and interaction with specific NAFTA sectors and working groups, and
  - integration of environmentally-related working groups of the Security and Prosperity Partnership, to identify how the results provided in the concept of NAFTA'S GREEN IMPACT could both provide momentum for and be supported by environmental cooperation under the auspices of the Partnership,
- national level:
  - specific working groups with a domestic but also a trilateral focus, to support the elements in the concept that are domestic responsibilities (federal, subnational, trilateral and their combination),
- regional level:
  - specific working groups with a focus on regional characteristics that have a particular relationship to the concept of NAFTA'S GREEN IMPACT and to NAFTA (federal, subnational, trilateral and their combination),
- non-governmental level:
  - involvement of the public, NGOs, experts, and industrial associations/ business communities in the concept, to gather additional information for the analysis and to act upon the results of the concept.

These levels can be generally divided into two parts – first, the governmental part, referring to formal cooperations (for example, cooperation among ministerial units or working groups and governmental unions in specific regions), and second, the informal part, referring to voluntary interaction such as regional cooperation and public and business integration (for example, through additional memorandi).

**(d) Design: *a fixed background allowing for a flexible application***

The topic design relates closely to the semi-type in general. Both emphasize the fact that the rather fixed NAAEC creates flexible opportunities for the implementation and transfer of the concept of NAFTA'S GREEN IMPACT. The wide scope of the NAAEC, which can focus on basically any environmental topic within the North American region, allows it to address in practice the specification of environmental assessment to adhere to the requirements of the key statement for greening NAFTA. During the practical application of the concept itself, it can be extended and adapted in its individual steps, and suggestions for the responsible governmental levels can be developed.

The CEC, as the central institution in the NAAEC, could provide the background for working with the results of the concept. It could address these results or parts of the concept through its working program, based on the Council's approval. The domestic and regional levels fill in and augment the general framework provided by the CEC. The non-governmental level is a support for the governmental initiatives.

### 8.3.2 Requirements for NAFTA'S GREEN IMPACT

In sum, the semi-type is the key type of multi-level governance in the concept of NAFTA'S GREEN IMPACT, allowing flexibility in the development of the concept, in its practical implementation, and during the extension and improvement of the concept based on a fixed background. However, the flexibility to shift a focus to type I and type II also becomes an important component in the successful development as well as the eventual application of the concept.

The concept of NAFTA'S GREEN IMPACT combines assignments for the individual governance levels as they are integrated into the NAAEC and its practical implementation. The NAAEC defines individual scopes of action and tasks to the governance levels. The agreement defines the individual tasks in a variable level of detail, enabling tasks to be implemented in a number of different ways.

The tasks for the concept of NAFTA'S GREEN IMPACT, illustrated in Table 15, are developed for the different governance levels according to the individual mandate that the NAAEC assigned to them.

Table 15: Multi-level governance and the level's general scope of tasks in the concept of NAFTA'S GREEN IMPACT

(author's compilation)

<b>Dimension: Institution/ levels</b>	<b>general scope of tasks</b>
<u>Intergovernmental/ international level:</u> CEC	<u>superior guiding and advisory tasks</u> such as <ul style="list-style-type: none"> <li>- coordination of the concept NAFTA'S GREEN IMPACT,</li> <li>- definition of specific guidelines for the individual parts of environmental assessment,</li> <li>- guidance of the pilot project phase,</li> <li>- evaluation of the concept,</li> <li>- trilateral promotion of the concept,</li> <li>- documentation center related to the concept,</li> <li>- performance of NAFTA EA with a focus on its role within the concept,</li> <li>- incorporation of results into the work of the CEC,</li> <li>- linking of inferior governance levels and public networks with view to the concept and its results,</li> <li>- creation of a trilateral basis for cooperation of the domestic and regional levels.</li> </ul>
<u>national level:</u> referring to the level that is responsible for conducting environmental assessment: <ul style="list-style-type: none"> <li>- the federal level,</li> <li>- the state level,</li> <li>- both, if applicable</li> </ul>	<u>executing tasks</u> such as <ul style="list-style-type: none"> <li>- promotion of the concept,</li> <li>- domestic support for the concept,</li> <li>- incorporation of the results into national activities and through the CEC Council in the work of the CEC.</li> </ul>
<u>regional level:</u> specific regions in North America, either as a subunit or as a combination of several states in a national and international context, created on the basis of specific topics and tasks (for example, an interest in a common natural resource or a specific industrial region)	<u>specifying tasks</u> such as <ul style="list-style-type: none"> <li>- support on the national level,</li> <li>- development of specific regional needs for the concept,</li> <li>- incorporation of the results of the concept into regional concepts (e.g. development, environmental protection).</li> </ul>

Dimension: Institution/ levels	general scope of tasks
<u>non-governmental level:</u> mainly the general public (North American citizens/ residents), NGOs, business communities, additional experts etc. (based on the intermediate level of multi-level governance)	<u>participatory and commenting tasks</u> such as <ul style="list-style-type: none"> <li>- participation in the development of the concept,</li> <li>- participation in the application of the concept,</li> <li>- participation in specific topic-related coordination agreements,</li> <li>- participation in evaluation of the concept.</li> </ul>

Based on the mandate that the NAAEC provides for the CEC, the Commission will assume superior guiding and advisory tasks in the concept of NAFTA'S GREEN IMPACT. The Commission will mainly take on the role of a coordinating institution, developing the concept and elaborating its steps and guidelines, as well as its application requirements, in close cooperation with the other levels. It will also eventually monitor the concept through pilot studies and in its long-term implementation. As a trilateral institution, the Commission may provide assistance for trilateral networking among the different countries concerning (based on the general comments by Expert J) the concept, by promoting the concept, supplying information on it, and acting as a gathering point for information and as mediator. Additionally, the CEC could serve as a model for the institutional embedding of environmental assessment (id.) and specifically as a information gathering point. As it is answerable for the NAFTA EA, the Commission plays the lead role in executing the assessment and adapting the studies to agree with the concept of NAFTA'S GREEN IMPACT.

The Commission could provide trilateral results that reinforce binational topic-related cooperation (based on a general comment of Expert I), also for the regional level. Additionally, the CEC may work with the results of the concept and integrate it either into its "Environment, Trade and Sustainability" section or into other parts of the working program.

The national level, with its federal and state levels, will mainly perform executive tasks. These levels are responsible for the ex-ante project EIA and SEA for policies, plans and programs in a domestic and transboundary context, and thus promote the concept and support the proponents during the application. Additionally, the levels may work with the results of the concept on the various domestic levels.

Prior to and in sync with the process of implementation, the national level applies the pilot studies and participates in a constant evaluation process of the concept, thereby contributing to its development.

The regional level is not addressed in the NAAEC; thus one cannot deduct its tasks from the mandate provided to it in the agreement. In the concept, this level is an additional "expert level" that defines the tasks of the two superior levels. The regional level can be seen either as a formal or an informal aggregate of local and state



governmental representatives who pursue a common objective for the region. By articulating the region's needs and demands, this group advances a common and regional-specific purpose that supports the national level. These interests can also politically influence the domestic and NAFTA-related level through the Governmental Advisory Board and thus also the work of the CEC within the concept.

The non-governmental level performs participatory and commenting tasks in the concept of NAFTA'S GREEN IMPACT as it is generally indicated in the NAAEC. It thereby covers elements such as public comments on the development and application of the individual steps of the concept. Here, the general public and topic-related NGOs function as external experts. The fact that proponents of the project, policy, plan or program who participate in the pilot studies are regarded as public representatives increases public influence on the development of the concept even further. Topic-related cooperation memorandi, supplied mainly by the business sector in its role as public representative, could help implement the concept and promote goal-oriented integration of the results.

In sum, the levels fulfill individual tasks, so that the concept of NAFTA'S GREEN IMPACT can cover a wide array of objectives, tasks and fields.

## 8.4 The Concept of NAFTA'S GREEN IMPACT

Based on the analysis and on the requirements established in the previous (sub-) chapters, this chapter introduces the concept of NAFTA'S GREEN IMPACT (see Figure 17). The concept presents an **analytic, adaptation and monitoring cycle** consisting of **three central steps** with a total of **five tasks**.

**Step I "Summary of results"** describes the two opportunities for the NAFTA EA to incorporate the results of the studies as a support for ex-ante environmental assessments. This step presents **two tasks**, which are divided into **(a)** a thematic part based on topic-related synopses of all studies and **(b)** a visual part based on thematic maps. The CEC and, therefore, the international level, leads in the execution of step I (For step I see Chapter 8.4.1, 8.4.2).

**Step II "Extension of the environmental assessment procedure"** describes the extension via NAFTA of elements within the procedure of SEA for policies, plans and programs and project EIA as well as within their transboundary components. Again, this step consists of **two tasks**; **(a)** to focus on an analysis of the two types of environmental assessment regarding their possible interaction with NAFTA itself and their relationship to the results provided in step I, and **(b)** to extend the existing domestic procedure through additional public participation, governmental consultation and expert recommendations. The nation states are the lead level in step II. As Figure 17 illustrates, step I could also be transferred directly to the project EIA by skipping the SEA, since the SEA is not consistently applied in the NAFTA countries according to the ideal standards of the concept. (For step II see Chapter 8.4.3, 8.4.4).

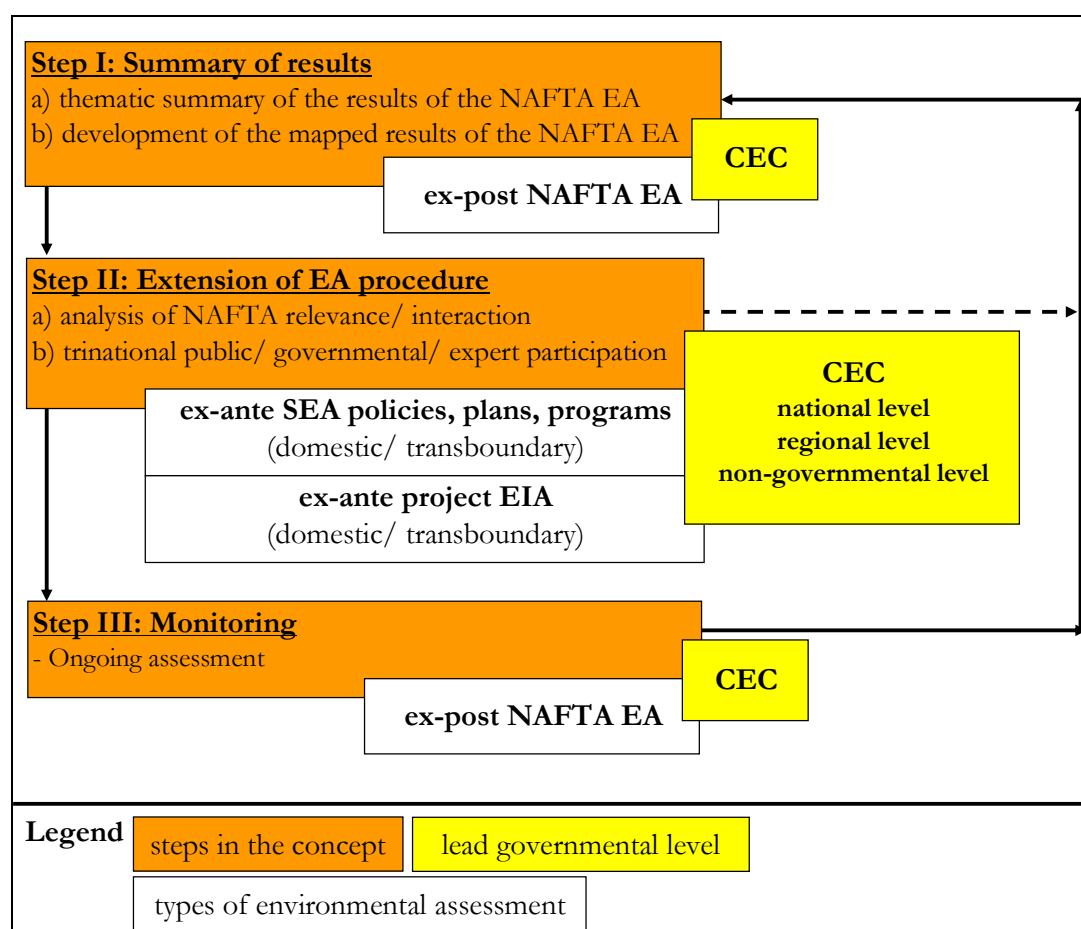
**Step III "Monitoring"** consists of a constant analysis of the results of steps I and II

based on the ongoing NAFTA EA. The results of the monitoring feed into **step I (a) and (b)** again in order to generate new and updated information for the maps and summaries. The analytic, adaptation and monitoring cycle continues. (For step III see Chapter 8.4.5).

In this chapter, the five individual tasks of the concept of NAFTA's GREEN IMPACT are divided into three sections. **First**, each task is described regarding its scope, its possible impacts on greening NAFTA, and how the task could contribute to decreasing NAFTA's negative environmental impacts and increasing the positive ones.

Figure 17: The concept of NAFTA's GREEN IMPACT

(author's compilation)



**Second**, the tasks are linked to the types of environmental assessment, describing the possible practical implementation of the tasks within the scope of the respective instrument. Specifically, the chapter explains references to the SEA of policies, plans and programs and to the project EIA, with a separate reference to the transboundary components of both. This section concludes by describing the relationship of the respective task to the NAFTA EA.

The two NAFTA EA case studies are used to illustrate the results of these interactions. Despite the fact that the types of environmental assessment are not equivalent in the three countries, the tasks are related to all three countries in a similar way.

These connections between the types of environmental assessment and the greening of NAFTA cannot be seen as separate, but rather as interlocking. It should also be pointed out that the tasks do not necessarily require a similar scope for all types of environmental assessment, but rather are adapted individually to the respective task.

**Third**, for each task, the main duties for each governance level are also presented. The duties of the CEC lie within its scope and mandate and do not challenge these positions politically. The duties create a superior frame for the steps and tasks of the concept and promote a trinationally equal approach. The domestic and regional levels fill, concretize and apply this frame. The activities of the non-governmental level amend these activities of the three governmental levels; however, the scope of the tasks differs for each level. Table 16 provides a general overview of the levels and their key tasks and responsibilities.

This chapter also addresses challenges and limitations facing the practical implementation of NAFTA'S GREEN IMPACT. Furthermore, it discusses opportunities that the CEC, as NAAEC's trilateral core institution, has for integrating these tasks as well as incorporating the results into other CEC activities.

In conclusion, the possibility of transplanting NAFTA'S GREEN IMPACT into further trade agreements is discussed, as well as the challenges facing such an attempt.

NAFTA'S GREEN IMPACT does not strive to establish harmony among the three nations' domestic regulations, but it does highlight the opportunity for a trinationally equal analysis of NAFTA's environmental impacts. The proponents could assume all tasks voluntarily, and the governments involved could realize the project, policy, plan or program. Tasks do not necessarily need to be stringently applied at all levels and in every NAFTA country, but rather can be applied separately and individually by the authority in charge and the proponent of the proposed project, policy, plan or program. Furthermore, some sub-items of the tasks are relevant for several aspects at the same time; for example, a similar suggestion is created for various tasks.

The concept of NAFTA'S GREEN IMPACT can basically be applied by all proponents for EIA and SEA in North America, but their exact relationship to NAFTA needs to be identified. In general, within the concept it is assumed that the SEA is more closely related to NAFTA than individual projects. The policies, plans and programs analyzed through a SEA are – similar to NAFTA – also located on a superior level. They form an important intermediate step between NAFTA and project EIA; however, the project level is the practical level and thus also a central element of the cycle.

Table 16: Tasks for the governance levels to help in supporting the steps of NAFTA'S GREEN IMPACT

(author's compilation)

The leading level for each task is underlined.

Steps	CEC	National level	Regional level	Non-governmental level
<b>Ex-post NAFTA EA</b>				
<b>Step I(a): <u>topic-related</u> summary of the results of the NAFTA EA</b>	<u>Develops the topic-related summaries based on the results of the NAFTA EA.</u>	Promotes the voluntary integration of the summaries as additional information in the EIA/SEA procedure.	Relates the summaries to their region and promotes their needs through the Governmental Advisory Board.	Comments on the summaries to improve their quality.
<b>Step I(b): development of mapped results of the NAFTA EA</b>	<u>Develops the regional/ sectoral maps based on the results of the NAFTA EA.</u>	Promotes the voluntary integration of the maps as additional information in the EIA/SEA procedure.	Relates the maps to their region and promotes them to the responsible EIA/SEA authorities.	Comments on the mapped results to improve the quality of the maps.
<b>Ex-ante SEA for policies, plans and programs (domestic/ transboundary)</b>				
<b>Ex-ante project EIA (domestic/ transboundary)</b>				
<b>Step II(a): analysis of NAFTA relevance/ interaction</b>	<u>Developes general indicators to identify the relationship of the projects, policies, plans and programs to NAFTA.</u>  <u>Develops the interaction between information needed for NAFTA EA and that which</u>	<u>Identifies NAFTA-related projects, policies, plans and programs based on the indicators.</u>	<u>Develops region-specific indicators to identify the NAFTA relationship of the key projects, policies, plans and programs relevant for the respective region.</u>	<u>Comments on the development of indicators to identify the NAFTA relationship of the projects, policies, plans and programs.</u>

	<u>could be provided by SEA and project EIA in a NAFTA context.</u>			
<b>Steps</b>	<b>CEC</b>	<b>National level</b>	<b>Regional level</b>	<b>Non-governmental level</b>
<b>Step II(b): trinationa public participation/ governmental consultation/ expert recommendations</b>	<u>Develops guidelines and coordinates extended participation/ consultation procedure.</u>  <u>Identifies experts/ creates expert pool.</u>	<u>Promotes and enforces extended participation procedure.</u>  <u>Identifies experts/ creates expert pool.</u>	<u>Participates in the extended public participation and governmental consultation procedure.</u>  <u>Suggests experts with regional expertise for the expert pool.</u>	<u>Public is involved in the extended participation procedure, along with regional governmental authorities and regional experts (non-members of the expert pool).</u>
<b>Step III: monitoring</b>	<u>Monitors/ integrates the NAFTA-related SEA and EIA results into the NAFTA EA for future assessments.</u>	Supports decision on new NAFTA EA studies in relation to the country.  Includes the NAFTA-related results into the domestic monitoring procedure of EIA and SEA.	Supports decision on new NAFTA EA studies in relation to the region and suggests new studies.	Comments on the decision on new NAFTA EA studies and suggests new studies.

Further specification through criteria and pilot studies is needed to identify to what extent a project is related to NAFTA, how to distinguish NAFTA-related projects, policies, plans and programs from those without a NAFTA relationship, and to what extent the non-related projects could also contribute to the concept. At present, no requirements stipulate that the proponents of projects, policies, plans and programs must incorporate the results provided in the studies of the NAFTA EA. However, the concept of NAFTA'S GREEN IMPACT is designed to be open to all SEAs and EIAs: Any proponent could gather the information in the summaries and translate it into all kinds of projects, no matter to what extent the respective project, policy, plan or program actually relates to NAFTA.

#### 8.4.1 Step I (a): Summary of the Results of the NAFTA EA

The first task is based on existing information concerning the environmental impacts of NAFTA, and it sets the concept of NAFTA'S GREEN IMPACT into motion. At present, the studies of the NAFTA EA provide information on the positive and negative environmental impacts caused by the trade agreement; however, the CEC and the nation states seldom incorporate the findings of the studies. Experts interviewed also often critiqued the lack of political and institutional integration of the results into the NAFTA EA, as well as the role of the two governance levels.

The integration of summary results would allow the results of the individual studies of the NAFTA EA to be linked with each other, thematically as well as regionally, and would also help identify potential research areas for the ongoing NAFTA EA. The maps would illustrate the aspects covered by the studies so far and interlink them with the sectors covered in the studies.

The results of the studies, by covering a wide variety of NAFTA sectors, NAFTA connections, regions and thematic foci, create pertinent reference data for a future analysis. This data can be integrated into an extended analysis of the SEA and project EIA in a domestic and transboundary context (see step II, Chapter 8.4.3).

More specifically, the results of the existing NAFTA EA studies could be summarized in concordance with other topics, which would provide additional information to be fed into NAFTA'S GREEN IMPACT. Summaries could be interlaced with, for example, NAFTA-related sectors such as energy, agriculture and transportation, specific regions such as the border regions and sensitive environmental areas as identified in the CEC Atlas, and with specific environmental media as listed in the Analytic Framework, e.g. air, but also species of trinational concern. Examples of these topic-related summaries could include:

- i. environmental impacts and their NAFTA-related origins according to sector, region and environmental medium, including indices of missing data,
- ii. suggestions for fulfilling the key statement for greening NAFTA in terms of decreasing the negative and increasing the positive impacts for the types of jurisdiction (CEC, national level, regional level, non-governmental level),
- iii. suggestions for fulfilling the key statement for greening NAFTA in terms of decreasing the negative and increasing the positive impacts for the CEC's "Environment, Trade and Sustainability" section and additional CEC sections,
- iv. suggestions for the various types of environmental assessment in a NAFTA-related

context.

Information gathered in Case Study 1 on the Mexican Sierra Madre Occidental could augment the following:

- i. knowledge concerning environmental impacts on the forestry sector in Chihuahua and Mexico (included in forestry policy SEA), the protection of biodiversity in North America (included in program SEA with biodiversity elements), and the shared water system of the US and Mexico (included in the spatial SEA for the border area),
- ii. recommendations for the Mexican federal and state level, for the regional level of the Sierra Madre Occidental, for the transboundary regional level of Mexico and the US on how to deal with these impacts in order to fulfill the key statement on greening NAFTA,
- iii. recommendations for fulfilling the key statement by interacting with the “Environment, Trade and Sustainability” section (e.g. greening the supply chains for forest products) as well as the CEC programs related to the protection of forestry, biodiversity and water, and
- iv. recommendations for environmental assessment in the sectors related to forestry, biodiversity and water (e.g. saw mills and the sectors mentioned in item i).

Similarly, Case Study 2 on NAFTA’s Transportation Corridors could contribute information in a national, binational and trilateral context to summaries on

- i. environmental impacts on air (included in energy SEAs), transportation development (included in spatial SEA of areas with a high traffic volume) including references to missing data on particulate matters,
- ii. recommendations for the federal, state and local levels, the border regions, and for the trilateral approach to NAFTA’s transportation corridors, on transportation planning and how to deal with these impacts,
- iii. recommendations for greening NAFTA, for the “Environment, Trade and Sustainability” section as well as for the CEC programs related to the protection of air quality,
- iv. recommendations for environmental assessment in the transport sector.

These summaries could contribute to the greening of the NAFTA in two ways. First, based on the results of the NAFTA EA, the summaries help identify possible environmental impacts of a NAFTA-related project, policy, plan or program. The new project, policy, plan, or program may be adapted by taking these recommendations on how to reduce the negative and increase the positive impacts into account. At present, proponents who would like to address their studies to the results of the NAFTA EA must identify the NAFTA EA studies that are relevant to their project, policy, plan or program on their own.

Second, the project, policy, plan or program can fill in some of the data gaps of the NAFTA EA analysis that were identified in the studies (see step II(a), Chapter 8.4.2).

The summaries developed in step I(a) will be visualized in step I(b), with the development of additional maps.

### 8.4.1.1 Requirements for the Types of Environmental Assessment

#### *SEA for Policies, Plans and Programs*

The thematic results of the NAFTA EA could be applied to related SEA for policies, plans and programs. In the **first** step, the results could apply to two levels of SEA, to the “design,” through a policy or programs, as well as to the “practical implementation,” through a regional development plan/ spatial plan. New or amended policies, plans and programs could heed the results of the summaries and integrate them, in order to react domestically to NAFTA’s impacts. The results of the NAFTA-related section of the SEAs could thus help channel NAFTA’s impacts on a superior level for the inferior level of project EIA.

In a **second** step, future SEAs could be extended in order to provide specific information for the NAFTA EA and existing or planned topic-related summaries (see step II(a), Chapter 8.4.2).

#### *Project EIA and transboundary EIA*

Similar to the SEA, projects related to the topics of the respective summaries could integrate the results of the NAFTA EA. In the case that a superior SEA related to the summaries exists, the results of this SEA would automatically influence the project level in general, and with detailed requirements for the projects more specifically. In the case that no superior SEA exists, the proponent could relate the information and recommendations of the summaries to the planned activities and adapt the project according to their recommendations, in order to further reduce environmental impacts with a relationship to NAFTA.

Any proponent could take up these results as a **first** step, no matter to what extent the respective project relates to NAFTA; however, the results could be applied specifically in terms of a NAFTA relationship. In the instance of the transportation sector, road constructions that are close to or regionally linked to Nuevo Laredo/ Laredo and Detroit/ Windsor, but also policies on air quality improvement, could relate to the summaries on border regions and air quality.

In a **second** step, future project EIAs could be extended in their analytic phase in order to provide specific information for the NAFTA EA and existing or planned topic-related summaries (see step II(a), Chapter 8.4.2).

#### *Transboundary SEA and EIA*

In the transportation study, the transboundary component of SEA becomes obvious, since the NAFTA transportation routes cover and thus impact all three countries, causing environmental effects as well as planning challenges in all signatory countries. Going beyond a purely transboundary SEA, a trilateral approach to policy and spatial planning and thus a trilateral SEA could be applied here, and the results integrated. This idea requires, however, the development of a trilateral instrument, a provision that will be politically challenging, especially when seen in the light of the negotiations for the transboundary EIA agreement.

The transboundary EIA could follow approaches similar to the domestic EIA.

#### *NAFTA EA*

At present, the NAFTA EA studies each have an individual scope. It would be useful to have contextual requirements for the studies to follow despite their individual topic-related focus. These requirements could relate to the three steps of NAFTA’S GREEN IMPACT and could entail,



among other things, a factsheet for easy identification of the key sectors, regions, environmental media, positive and negative environmental impacts and key statement for the various types of environmental assessment towards greening NAFTA presented earlier.

In the NAFTA EA studies already affected by NAFTA'S GREEN IMPACT, this factsheet could also name the domestic points of contact, NGOs and experts who provided NAFTA-related comments on the study (see step II(b) on extended participation).

In general, and addition to the factsheet, the identification of negative and positive impacts could also be an explicit requirement, so that the author of the study would not be left to determine its focus. The content of the NAFTA EA studies might have to be adapted so that the information would be available during the process of the SEA and EIA in a domestic and transboundary context. The studies could also specify the kinds of projects, policies, plans and programs to which these recommendations would be applicable, in order to exclude projects that are not part of the context. The study on the Sierra Madre Occidental could establish recommendations on, for example:

- saw mills as an example of project EIA,
- the regional development of the Sierra Madre concerning the spatial SEA,
- the forestry sector as an example of the program and policy SEA,
- forest and water as environmental media.

These recommendations could be applied whether or not the respective evaluation is connected to NAFTA.

It may be advisable to supplement already completed NAFTA studies with these recommendations and factsheets.

#### 8.4.1.2 Key Tasks for the Governance Levels

##### *CEC*

With regard to the development and implementation of step I, NAFTA'S GREEN IMPACT assigns the leading role to the CEC. The Commission could collate the results identified in the studies into topic-related summaries, and thereby identify the topics of the summaries (sectors, regions, environmental media etc.) to create reference bases and develop key elements that all summaries – and thus the future NAFTA EA studies – should cover.

With respect to establishing the summaries, two additional steps are possible. First, the Commission could draw conclusions from the summaries, a step that this dissertation research indicates has been incompletely executed so far. These conclusions would pinpoint NAFTA's impacts on specific sectors and in specific regions. Second, the CEC could develop comprehensive recommendations for sectors and regions. These conclusions and recommendations could then provide additional information for the EIA and SEA, which then would allow the project, policy, plan or program to be adapted on the basis of these results.

With these summaries, the Commission would create an extended reference framework, not only for specific studies and regions but for all sectors, topics and regions touched by NAFTA, which would recommend activities or mitigation measures during the process of SEA and EIA in a

domestic and transboundary context.

Additionally, the Commission could work with the results of the summaries, for instance, by using them to identify research questions for future NAFTA EA studies, link the different sectors and regions, and identify further tasks for CEC activities beyond NAFTA'S GREEN IMPACT.

The CEC could thereby foster interactions among the various results, for example, by bringing together the regional influence on water with long-range impacts. The effects of the changes that occur in the Sierra Madre Occidental have influences on the US-Mexican border, and thus relate to impacts on water that originate in the impacts of the transportation sector.

In sum, step I(a) assigns new tasks to the CEC, through which the Commission works with the results of existing NAFTA EA studies and thus helps fill the gap of a lack of integration of the results.

### ***Responsible national level***

The domestic level – the federal and/ or the subnational one – as the level in charge of conducting EIA and SEA, could use the CEC summaries as a reference framework for the project-specific, sectoral and regional analysis regarding NAFTA's environmental impacts. The proponents of the projects, policies, plans and programs could integrate the information and the results of relevant summaries as additional information into the environmental impact statements. Once included in this statement, the information would also be evaluated in terms of the environmental impacts of the project, policy, plan or program. Additional mitigation measures related to the content of the relevant summaries, as well as the integration of opportunities for increasing positive impacts on NAFTA, would also be required.

As NAFTA'S GREEN IMPACT necessitates extra work and voluntary participation on the part of the proponent, it is imperative that the concept and its applications be strongly promoted to proponents, governmental authorities and the public. This promotion should be a central task for the federal as well as the subnational level and could be supported through training methods such as capacity building, but also through incentives, e.g. a specific label (see Chapter 8.5).

### ***Regional level***

The usually informal governmental cooperation could probably not contribute directly to any changes and specific tasks in the procedure of environmental assessment, neither in the domestic nor in the NAFTA EA. However, governmental authorities could pay special attention to summaries that relate to their region and thus advocate for the integration of the results into regional development plans. The regional authorities of the states and communities related to Nuevo Laredo/ Laredo (Case Study 2) could focus on summaries that involve the US-Mexican border area, and transportation and air in general, as environmental media. In the next step, the regional authority on the state level could bring needs and desires related to the summaries to the CEC through the Governmental Advisory Council, for consideration in the development of further NAFTA EA activities.

This task is especially valuable to the regional level, as it allows similar NAFTA problems in different North American regions to be identified. It facilitates a regional cooperation or an exchange on certain topics.

### ***Non-governmental levels***

The non-governmental levels could apply to different activities. First, the public in general, and especially the National Advisory Committee, could comment on the criteria for the content of the summaries and the content itself. The CEC usually publishes their activities, so that the public has an excellent opportunity to comment on them.

Second, NGOs in particular could integrate the results into their work. The summaries provide an excellent overview of specific topics, sectors and areas and can thus easily be linked to NGO activities. Summaries related to biodiversity and air quality could be integrated into the work of NGOs situated in the Sierra Madre Occidental and the border areas, respectively (Case Study 1). This integration could facilitate the topic-related cooperation between NGOs in different countries in addressing specific topics based on trilateral NAFTA-related research results.

Third, proponents whose projects, policies, plans and programs are representative of specific sectors could promote the results of the summaries in their business communities in order to create external liaisons to work with the results.

In sum, step I(a) would enhance opportunities for the public to work with the results of the NAFTA EA studies and thus to contribute to greening NAFTA.

### **8.4.2 Step I (b): Mapping of NAFTA EA Results**

Step I(b) would be a visual extension of the summaries developed in step I(a). As a second step in working with the findings of the NAFTA EA, maps could be used to illustrate the results of the summaries. These maps could depict the environmental impacts of NAFTA. At present, combinations of regional and sectoral analyses are usually carried out separately from each other; therefore, this visualization could be the basis of future ex-ante analyses of environmental assessment for the various types. The maps could be divided into three levels, where each level would indicate positive and negative impacts as well as missing data:

- Regional mapping, illustrating all areas that have been analyzed, for example, the Sierra Madre Occidental (Case Study 1) and the regional course of the present and future NAFTA transportation corridors (Case Study 2),
- Sectoral mapping, which would specify the regional maps according to different sectors such as transportation (Case Study 1), or agriculture and energy, thereby regionally highlighting the focus of the NAFTA EA regarding a certain sector,
- Mapping of impacts on natural resources, again specifying the regional maps regarding national and transboundary natural resources and the areas that are covered by the different NAFTA EAs, for instance, by detailing the effects on the water courses of the shared US-Mexican hydrographic system mentioned in the Sierra Madre Occidental (Case Study 1).

These maps have two key objectives. First, they use domestic environmental assessment as an opportunity to visually relate interactions of the projects, policies, plans, and programs to the impacts of NAFTA. At present, the studies of the NAFTA EA do not require maps indicating the regional focus of the studies (Case Study 2 on NAFTA's Transportation Corridor does not include a map). The maps also help identify cumulative effects of NAFTA that could then be

integrated into the procedure of environmental assessment.

Second, these overlaps would also help relate NAFTA's environmental hotspots to North American environmental aspects. The impacts on natural resources could connect to maps on biodiversity and conservation, where regional interactions and possible dangers for these aspects due to NAFTA would be indicated. Opportunities for transferring the results of this analysis to other regions with similar natural resources and geographic elements could also be more easily identified. Projects, policies, plans and programs that either fall within a certain sector or lie within the region where studies of the NAFTA EA were already conducted could better integrate the studies' results or recommendations for greening NAFTA.

The maps elaborated in step I(b) could extend the existing CEC Atlas (see Annex I), thereby building on the previous work of the CEC. Chapter 8.4.3 provides additional opportunities for mapping of NAFTA-related information.

### 8.4.2.1 Requirements for the Types of Environmental Assessment

#### ***SEA for Policies, Plans and Programs***

When a SEA is being conducted, the maps could contribute to the analysis of policies, plans and programs in relation to the NAFTA sector. As the studies of the NAFTA EA usually focus on areas and topics that are of high priority regarding possible environmental effects of NAFTA, the relationship between specific sectors and NAFTA becomes regionally visible: The maps could illustrate how and where the respective policy, plan or program is of high environmental importance under NAFTA within this country. These maps would be especially relevant for the SEA of development and spatial plans, as they highlight regional NAFTA hotspots. A Mexican border development program could thus easily identify the NAFTA-related impacts that take place in this area and could then examine closely the results of either the summaries or the respective NAFTA EA studies themselves. The maps could provide information on possible cumulative effects on future regional or sectoral developments within a certain area and the impacts of NAFTA that have been already detected.

In addition, these maps would facilitate and create a basis for the extended domestic procedure of environmental assessment (see Chapter 8.4.4).

#### ***Project EIA***

The studies of the project and transboundary EIA could clearly refer to the summarized maps. As a first step, the maps could be consulted during the development of an environmental impact statement, as they help identify impacts in relation to NAFTA and the project: Based on the maps, a proponent could easily determine whether a project relates to an existing NAFTA EA study, either regionally or sectorally. The proponent could then relate the project EIA to the thematic summaries as well as to the NAFTA EA studies themselves.

#### ***Transboundary SEA and EIA***

This step would apply to domestic as well as transboundary SEA and EIA.

#### ***NAFTA EA***

The results of the maps would help identify potential areas of research for the ongoing NAFTA

EA. It would visually point out regions that have not received sufficient attention, either in general or with respect to a certain sector. The border area, as an example, might have been analyzed in terms of ground water, but what about in terms of biodiversity? The maps would illustrate the areas covered by previous studies and interlink them with sectors that are covered in the studies. Future NAFTA EA studies could then consider this visual information and fill the gaps.

### 8.4.3 Step II (a): NAFTA-related Extension of the Domestic Environmental Assessment Procedure

The approaches to the three types of NAAEC's environmental assessment differ in regard to their individual scopes and objectives as well as their domestic foci and practical implementation. Despite these differences, they have key components in common, which can be extended via selected criteria that interact with the greening of NAFTA. This enhanced procedure of environmental assessment could expand the regular tasks and the analysis, for example, by the following three steps:

- integrate a specific NAFTA section in order to identify (missing) data that could form an analytic basis for the ongoing NAFTA EA (closely interacting with Chapter 8.5);
- participate in an extended, ongoing monitoring procedure to check the results related to NAFTA (either individually or through NAFTA EA; see Chapter 8.4.4) based on the information provided in the aforementioned NAFTA section;
- interact with an extended process of public participation, governmental consultation and expert recommendation (this item is explained separately in Chapter 8.4.4).

These tasks allow for a deeper ex-ante analysis of the selected projects, policies, plans and programs with regard to the positive and negative environmental impacts of NAFTA. This analysis would provide information for the ongoing NAFTA EA: the location of projects and activities, emission rates and types, impact on different environmental media and types of products. All of these aspects would be closely related to the information required in the Analytic Framework in order to successfully assess NAFTA's environmental impacts. Initial questions for this extended ex-ante analysis include the following (related to the content of the Analytic Framework, Table 9):

- NAFTA's Institutions: How does the project, policy, plan or program interact with the activities of the CEC?  
A strong relation could be evaluated as a positive impact, a non-existing relation as a neutral or even negative impact.
- Production, Management and Technology/ Sectoral and geographic concentration: Are there any other projects, plans, programs and activities that interact with the proposed activity, and if so, what will be done to avoid cumulative impacts in this area and on the primary affected environmental media?  
A strong interacting analysis that takes the results of other projects, policies, plans and programs into account could be seen as a positive impact, whereas a weaker interaction could be seen as a negative impact.
- Environmental Impacts and Indicators/ Air: An increase in carbon dioxide (CO<sub>2</sub>) on the

local level and in a long-range timeframe could be regarded as a very negative impact, whereas a positive impact would be a CO<sub>2</sub> reduction on the local level and – if possible – in a long-range timeframe.

Infrastructure projects, for example, could identify the amount of natural resources needed for the construction of the respective project, and the expected and eventual increase in trade on these roads and other roads in the transportation system, but also the expected possible reduction of traffic on other access routes, etc. These projects could document, furthermore, information on the emissions caused by the amount and type of trade that is expected to take place.

The results could provide additional information for the NAFTA EA as an extended individual NAFTA-related monitoring. This information, if widely gathered, could create a network of information on certain topics that could also identify additional opportunities for increasing positive NAFTA-related impacts. It could also help close analytic gaps in the existing NAFTA EA studies and thus extend again the summaries and maps in step I. In particular, this data would enable the information on NAFTA relationships provided in the maps to be updated in a timely manner, and integrated into an additional EA layer in the CEC Atlas.

### 8.4.3.1 Requirements for the Types of Environmental Assessment

#### *SEA for Policies, Plans and Programs*

The domestic guidelines on SEA could integrate a special section that deals with changes that have occurred and could occur within the policy sector and program or spatial plan related to NAFTA. These sections could take into account how the respective policy, plan or program is influenced by NAFTA. In addition, these questions could help identify regional clusters or regions that are highly influenced by these changes under NAFTA (environmental hotspots in a different range). These impacts could either take place within one sector, several sectors or a mixture of sectors and regions directly or indirectly linked to NAFTA. This newly gathered information could then feed into the ongoing monitoring process as part of step III of NAFTA'S GREEN IMPACT (see Chapter 8.4.5); however, the interaction between the information required in the Analytic Framework and the information that could be provided through the SEA would have to be identified in greater detail. The extended NAFTA-related analysis could combine, for example, the regional coverage of the environmental hotspots identified in the maps in step I with the spatial plan of a specific area and the likely environmental impacts related to NAFTA of this new plan. A development plan for the Sierra Madre Occidental, for instance, could integrate a section on forestry development and its interaction with NAFTA. In contrast, a new transportation strategy as a policy could integrate a focus on the border areas and the NAFTA transportation sectors as a NAFTA-related element in its extended section. The extended version of the SEA would not only assess negative impacts but would also identify positive ones. Thus the adaptation of the policies, plans and programs would mitigate the negative and increase the positive impacts.

A special focus on this section could facilitate the adaptation of the domestic policy, plan or program to the goal of greening NAFTA. A high increase in the transportation sector as illustrated in Case Study 1 could require paying special attention to the domestic and trilateral transportation policy, as well as to spatial plans due to the regional dispersion of these

infrastructure projects. Here a strong interaction between SEA for policies and programmes and SEA for plans becomes particularly obvious.

### ***Project EIA***

As with the SEA, the existing domestic guidelines for the project EIA could be extended regarding the analysis of selected criteria relevant for the greening of NAFTA. These criteria differ with respect to the direct and indirect connection of the project and NAFTA itself, and could be analyzed in a specific NAFTA section. Just as in the SEA approach, the interplay between ex-ante and the ex-post information is a key component of the analytic, adaptation and monitoring cycle.

### ***Transboundary SEA and EIA***

The requirements for the SEA and EIA also apply to their transboundary extension. Regarding the transboundary EIA, the additional procedure could include a section with a focus on trilateral or binational issues, respectively. Questions could investigate possible impacts on the border area or trilateral environmental media and species, respectively; the latter are not explicitly covered within the NAFTA EA so far.

### ***NAFTA EA***

In step II(a), two relevant interactions between the NAFTA EA and the types of ex-ante EIA and SEA are to be found. First, the results of the previous NAFTA EA studies, together with the Analytic Framework, could help create guidelines for the extended section of environmental assessment. The analysis of the NAFTA studies could help identify the information that is missing for an extensive environmental assessment of NAFTA, and could then feed into the summaries and maps of step I.

Second, the forthcoming studies of the NAFTA EA could employ the results of the ex-ante EIA and SEA by integrating them into the analysis. As the extended form of environmental assessment also suggests ongoing monitoring, the monitoring would continuously provide information regarding NAFTA's environmental impacts. It would allow an ongoing assessment of the separate NAFTA aspects, an inquiry that is lacking at present.

## **8.4.3.2 Key Tasks for the Governance Levels**

In this step, all four levels are assigned central tasks, and thus no level is in the leading position.

### ***CEC***

In this task, the CEC has two key assignments. First, the Commission sets out criteria to identify the NAFTA-relation of the project, policy, plan or program. Second, the Commission develops links between the information in a NAFTA-related context, that is needed in the NAFTA EA, and that can be provided in the extended ex-ante procedure.

Though NAFTA's GREEN IMPACT could be applied to any project, policy, plan or program, the concept would be most useful if it were applied by NAFTA-related activities that affect NAFTA's green status. Clear criteria for defining which activities are most useful for the concept could reduce misunderstandings, lack of motivation and unnecessary costs for proponents as well as governmental authorities. The CEC could develop these criteria, which would then be applied

in all three countries on an equal basis.

In addition to the identification of projects that require a domestic EIA, the Commission could develop inclusion and exclusion lists that suggest participation in the concept for a certain type of projects, policies, plans or programs. Projects would be chosen according to their expected participation in NAFTA trade, policies and programs according to their relationship to sectors directly and indirectly covered by NAFTA, and plans according to whether they cover areas highly impacted by NAFTA. Here, the relation and the high quantity of impacts could also be derived from the maps and summaries developed in step I on summaries and maps of the concept. In addition, guidelines could help identify individual NAFTA-related projects. Here, it is especially important to define to what extent a project, policy, plan or program is regarded as NAFTA-related – either the activity as a whole once it fulfills selected elements of the criteria, or just the parts that are explicitly NAFTA-related<sup>123</sup>. As with the Analytic Framework for the NAFTA EA, the lists and guidelines could be elaborated upon in cooperation with a scientific and public network of experts (see non-governmental level).

As an example, projects related to any of the negative or unknown impacts identified in the studies of the NAFTA EA could automatically be regarded as NAFTA-relevant. If this criterion is acceptable, then any infrastructure projects, policies, plans or programs interacting with the two border crossings analyzed in Case Study 2 would be regarded as NAFTA-related and thus a possible activity for NAFTA'S GREEN IMPACT. Similarly, any project related to the forestry sector in the Sierra Madre Occidental could contribute to the concept.

In addition to the identification of the projects, policies, plans and programs, the CEC could identify interactions between the information required by the NAFTA EA and the information that can be provided by the ex-ante EIA and SEA in a domestic and transboundary context. Despite the fact that the Analytic Framework is very explicit in its methodology, the analysis of the studies of the NAFTA EA themselves show that the actual information needed to properly apply the Framework is partly missing. Further research, beyond the scope of the dissertation, is needed to determine to what extent the questions available in the Analytic Framework could develop these links.

The CEC could develop lists revealing an interaction between the Analytic Framework and the usual information gathered in EIA and SEA; for example, to what extent the project, policy, plan or program could affect environmental media in a NAFTA-related context. The CEC could also develop a list of information to be gathered in an extended EIA and SEA procedure, which would then serve the analysis in a later NAFTA EA. Here, the CEC could define what type of further information is needed to identify the impacts related to NAFTA and to mitigate the negative ones/ increase the positive ones.

### ***Responsible national level***

Again, it is part of the responsibility of the national level to apply the selection criteria and extend sections in the environmental assessment provided by the CEC. The responsible national level could integrate the lists and section structure that is suggested by the Commission into the

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<sup>123</sup> Similar to challenges that could be found elsewhere, for example, in the NEPA application outside of the US in the case of Border Power Plant Working Group versus Department of Energy (Tweedie 2006: 873 f).



respective domestic procedures of EIA and SEA. Any proponent of the project, policy, plan or program could apply it on a voluntary basis and receive incentives to compensate for the additional work involved (see Chapter 8.5).

Once again, the domestic level is also charged with promoting this task, as the activities for greening NAFTA are applied voluntarily. This promotion would not only include integrating a NAFTA-related section into the environmental assessment, but also cooperating directly with the proponents of the project, policy, plan or program in order to use the results of the selection criteria and the general content of the NAFTA-related section, perhaps in cooperation with the regional level.

### ***Regional level***

The regional level plays a pertinent role in the development of the inclusion and exclusion lists, the selection criteria and the general content of the NAFTA-related section, and thus cooperates directly with the CEC. As it focuses on the region-specific criteria, this level represents the smallest unit in this step of the concept. The Governmental Advisory Committee may play a key role here in terms of cooperation with the superior levels.

In addition, the regional level could influence the practical application of the results of the studies via specific and direct activities and in cooperation with the responsible federal level. The local communities could cooperate regionally regarding NAFTA-related issues, for example, industrial accumulation in particular sectors and NAFTA's environmental impacts on environmental media. They could also establish initiatives for cooperation among the regions and the proponents of the project (for example, a special marketing and NAFTA labelling in case the projects apply certain environmental tasks; see Chapter 8.5).

### ***Non-governmental level***

Through its advisory functions, the non-governmental level may participate in the development of the selection criteria and the general content of the NAFTA section in environmental assessment studies. The JPAC and the National Advisory Committee, with their environmental experts, could participate in the meetings on this content or contribute information in a topic-related session. In addition, the public could comment on the content during the regular process of public participation.

Exacting and forceful public participation, in particular on the regional level, may motivate proponents of the projects, policies, plans and programs to engage in NAFTA's GREEN IMPACT.

## **8.4.4 Step II (b): Extended Public Participation, Governmental Consultation and Expert Recommendations**

The extension of the present participation and consultation process is a vital part of the extended NAFTA-related procedure for domestic environmental assessment. The procedure would explicitly grant the right to comment on domestic and transboundary EIA and SEA to

- any resident of the three NAFTA countries,
- any NGO acting as an expert representative on environmental matters in general and environment and trade issues in particular,
- the governmental institutions from other countries and from other state levels that usually comment on the same activity on the domestic level, for example, a department of

transport that would usually conduct the EIA on a highway project on the respective national level,

- the CEC as an expert on the trade and environment debate and on trilateral environmental issues in North America,
- experts who helped develop the NAFTA EA that fed information to the summaries and maps consulted for the environmental assessment.

Each of the groups is to be integrated into the extended procedure for different reasons. All residents should have the right to comment on possible impacts that occur because of NAFTA, as the agreement and its environmental impacts affect all North American residents and countries. This suggestion is mainly based on the rights of possibly affected people<sup>124</sup> and less on their role as local experts.

NGOs and governmental representatives may provide valuable information for the environmental impact statement and thus help to identify impacts, mitigate negative impacts, and increase positive ones. They should have the right to comment based on their individual working experience with these topics. They could comment on a similar situation or a similar project, policy, plan or program, though they may not be affected directly.

The CEC and the authors of the NAFTA EA studies should be included on the basis of their experience with the ongoing NAFTA assessment and the environment-trade intersection. Experts who conducted the studies of the NAFTA EA regarding a similar topic could comment on the impacts of the project, policy, plan or program on the basis of their experience with NAFTA's impacts. These comments could include recommendations on how the respective action could contribute to greening NAFTA. In addition, integrating the CEC could provide an opportunity for the Commission to comment on the study from the perspective of its section "Environment, Trade and Sustainability" and from a trilateral perspective concerned with protecting North American natural resources.

The extended form of participation, consultation and recommendation would allow a transfer of experience regarding the impacts of NAFTA. The extended version of participation and consultation could be applied to any project or activity related to NAFTA or to the section of the SEA that is linked to NAFTA. The project, policy, plan or program could benefit environmentally from these comments and experiences.

#### 8.4.4.1 Requirements for the Types of Environmental Assessment

##### ***SEA of Policies, Plans and Programs and project EIA in a domestic and transboundary context***

Regarding the SEA and the EIA, similar arguments could be applied in a domestic and transboundary context: The extant public participation procedure of the project EIA could be extended on the responsible domestic level. The experience and knowledge gathered from public

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<sup>124</sup> This suggestion is based on the idea of the CEC's Procedure of Citizen Submission on Enforcement Matters (NAAEC 1993: Art. 14, 15). This procedure allows all North American citizens, residents and NGOs to comment on the environmental misbehaviour of any of the three countries.

comments regarding comparable projects, policies, plans and programs in areas with similar natural or population features could lead to a different analysis of NAFTA.

The experiences of the public, governmental representatives, the CEC and other experts on various areas and sectors could make a valuable contribution to identifying the positive and negative impacts of NAFTA. Whether the comments should be limited to the extended analysis of NAFTA as a separate section, or to the whole policy, plan or program as soon as it somehow interacts with NAFTA, is a matter to be discussed elsewhere.

The extended participation, consultation and recommendation procedure would not necessarily be part of the extended procedure of environmental assessment and can therefore be applied separately. It has yet to be determined, however, if the extended participation procedure would only refer to the section of the study that is related to NAFTA, or if it refers to the complete assessment.

### ***NAFTA EA***

As studies of the NAFTA EA are usually presented at the public symposia, interactions between public participation and NAFTA EA have already occurred. However, the development of the studies themselves does not necessarily involve public participation and thus might escape public discussion and scrutiny. The CEC, therefore, could augment its homepage with a blog or virtual forum to allow public comments outside the context of symposia presentations. This procedure could be extended by presenting the results in the respective regions that are analyzed in the study and/ or to the governmental authorities that deal with the content of the study. These presentations might encourage the use of these results on a voluntary or governmental basis and incite the development of more tasks for the NAFTA EA.

## **8.4.4.2 Key Tasks for the Governance Levels**

As in step II(a), all governance levels are of similar importance, and no level takes a leading position.

### ***CEC***

The CEC carries the responsibility for guiding the superior extended participation process. Concerning the extended participation during a SEA and EIA, the Commission could announce the participation opportunity in its newsletter. In a section on its homepage, the Commission could present these EIAs and SEAs via a factsheet, which would briefly summarize the basic facts of the project, policy, plan and program: for instance, the current phase of the environmental impact statement, background information, the responsible company/ domestic authority and expected NAFTA relevance. The public and governmental representatives could comment on the project through the homepage and follow its process. Here, the CEC could explicitly encourage governmental consultation by contacting the respective authorities of the two partner countries.

As any NAFTA-related project, policy, plan or program is of trilateral importance, the Commission itself, with its mainly trilateral mandate, would have the opportunity to comment on it. The CEC could provide comments on its activities in the “Environment, Trade and Sustainability” section, but also on thematic projects such as existing and newly created initiatives

targeting trinational species such as the monarch butterfly and the humpback whale.

Furthermore, the CEC could establish an “expert pool” of external experts who have expertise on trade-environment links and who could comment voluntarily or by invitation of the CEC and the responsible domestic level on the respective EIA and SEA study. Those experts in particular who developed a study of the NAFTA EA could comment on projects, policies, plans and programs related to their field; for example, Sierra Club could comment on NAFTA-related infrastructure projects and spatial plans in all three countries. The CEC could thus compose an expert pool of authors who developed NAFTA EAs, researchers from the environment-trade-linkage and regional representatives suggested by the representatives of the regional level. These experts could be related to the various project types, sectors and regions. Furthermore, though the CEC’s budget is small, it could provide a financial compensation for external experts of the NAFTA EAs who comment on the studies. The CEC could also support the evolution of topic-related NGO coalitions and network of experts (based on a general comment of Expert J, Kennedy).

### ***Responsible national level***

The governmental authorities are responsible for promoting the extended public participation and governmental participation processes to the proponents of the project, policy, plan and program. Here again, strong public participation and interest in this task would strengthen the concept itself and motivate the proponents to apply this step (see Chapter 8.5).

In addition, the national level could suggest experts for the CEC expert pool, for example, national representatives for NAFTA-related elements of environmental assessment.

### ***Regional level***

The role of the regions, especially those highly negatively impacted by NAFTA, is to participate in the extended procedure through public representatives as well as the regional governmental units. Because NAFTA may have greater impact on certain areas, the regional level could suggest experts for the CEC expert pool who are experienced with these regions. This measure would encourage a strong regional focus in the extended analysis of SEA and EIA.

### ***Non-governmental level***

The public, as well as the various non-governmental organs created by NAAEC, could participate individually in the extended participation procedure – citizens as well as residents. Here, again, the role of the JPAC is key, as it represents the public in the work of the Commission and can thus closely examine the promotion process and the expert selection process in particular. This could be an opportunity to include the current JPAC and National Advisory Committee members as regular representatives in the expert pool.

## **8.4.5 Step III: Ongoing Monitoring of Steps I and II**

Step III is designed to monitor and adapt the results of steps I and II. The ongoing NAFTA EA continuously provides new information to augment topic-related summaries and maps, and could thus close research gaps with the new information gathered and monitored in step II. Furthermore, it could present additional information such as new NAFTA EA studies that would resolve analytic, sectoral and regional gaps identified in the first development of the summaries

and maps.

This additional monitoring information aims to improve the quantity and validity of the results of the NAFTA EA and the extended sections of the SEA and EIA, and will thus enhance the credibility of the concept of NAFTA'S GREEN IMPACT. Thus step III, with its monitoring tasks, closes the analytic, adaptation and monitoring cycle by feeding back into step I and re-starting the process. This step could follow the biannual cycle that the CEC presently uses for its public Symposia, where the studies of the NAFTA EA should continuously be presented and discussed.

#### 8.4.5.1 Requirements for the Types of Environmental Assessment

##### ***SEA for Policies, Plans and Programs and project EIA in a domestic and transboundary context***

The SEA and EIA procedures play an inferior role in step III. A strong relation between the information that can be provided through ex-ante assessments and the information needed in the NAFTA ex-post assessment is an important prerequisite for the successful implementation of this step. However, these activities could already be identified in step II (a) and (b), when the criteria for the NAFTA-related projects, policies, plans and programs could be identified, the content for the extended section of the SEA and EIA could be defined, and the additional information to feed into the monitoring could be provided.

##### ***NAFTA EA***

The NAFTA EA is the key type of assessment in step III. It integrates the results of steps I and II into the studies of the NAFTA EA and thereby monitors them. It is important to emphasize that the focus of the studies may shift, depending on the additional information made available through the newly gained data.

A virtual example: The summaries and maps developed in step I may identify the need to conduct NAFTA EAs with a new environmental focus on trinational species, an environmental element that has not received a lot of attention so far. Studies could then focus on the monarch butterfly, as the summaries and maps may identify that the transportation sector has a significant impact on a certain area which cuts through a migration route – a fact that might not have been noticed since the studies were mainly evaluated individually and less in their regional context (step I). Projects, policies, plans and programs relating to the transportation sector would then integrate the monarch butterfly into their SEA and EIA in a NAFTA-related context. In addition, through extended public participation, governmental participation and the involvement of experts on the monarch butterfly, similar trade-related experiences in other North American regions would be identified that had not been previously prioritized because the origin of the impacts, in these cases, might be NAFTA-related industrial pollution instead of infrastructure projects (step II). This broadly gathered information on the monarch butterfly in a NAFTA-related context is then monitored in step III. Based on this new information in the NAFTA EA, new mitigation and improvement measures could be identified and applied in new EIA and SEA procedures, as well as in protection programs for the monarch butterfly. The implementation of step III closes the analytic, adaptation and monitoring cycle, which then begins anew.

### 8.4.5.2 Key Tasks for the Governance Levels

#### *CEC*

In step III, the CEC again would be the leading level, as it is responsible for conducting the NAFTA EA. As this step would be integral to effective monitoring of the results of the ex-ante assessments and the feeding of these results back into the analytic, adaption and monitoring cycle, the Commission has a vital role to play in linking step III and I and for assuring that the cycle continues. The CEC would need to identify the topics of the forthcoming NAFTA EA studies based on the results of the additional information provided in steps I and II. In addition, the CEC would have to frequently update the summaries and maps in step I in order to provide the most recent information for future ex-ante studies.

#### *Responsible national level and regional level*

Both the national level and the regional level support the CEC in identifying key topics for the new NAFTA EA studies. Using the information in the summaries and maps, both levels assure that their regional and national interests are represented and monitored in the new studies.

Apart from the NAFTA EA, the responsible federal level can enhance its individual domestic monitoring of the EIA and SEA by including the information gathered in step II in the extended monitoring procedure.

#### *Non-governmental levels*

The non-governmental level, in particular the JPAC, the National Advisory Committees and NGOs, have the opportunity to comment on the selection of the new NAFTA EA studies. In addition, they may suggest new studies that they regard as relevant in relation to the results provided in steps I and II.

### 8.4.6 General Support through the CEC

As described in Chapter 6, the CEC has a broad mandate and could address almost every environmental issue as long as the Council approves the project (e.g. NAAEC 1993: Art. 10.2(s)). Furthermore, the CEC plays a central role within the NAAEC, in hemisphere-wide environmental protection and cooperation, and to a certain extent in the greening of NAFTA. Despite the fact that the Commission is clearly relegated to an advisory role rather than one with real political influence, the CEC can still support the steps and tasks of NAFTA'S GREEN IMPACT in a variety of ways<sup>125</sup>.

**First, the CEC could provide training courses and capacity building to proponents, governmental authorities and experts who participate in the concept of NAFTA'S GREEN IMPACT.** This task would be based on the goals for the future work of the CEC set out in the Puebla Declaration and on the general experience of the Commission and workshop activities (based on comments by Expert L). These workshops could also promote the concept and provide the first opportunity to conduct pilot studies.

**Second, the Commission could serve as a documentation center for the information gathered through the extended versions of the domestic environmental assessment**

<sup>125</sup> These general suggestions are also partly drawn from Garver, Podhora 2008.

**procedure and the NAFTA EA.** The CEC could create a publicly available database that includes all relevant information on the participating projects, policies, plans and programs. The center would publish all relevant information on the CEC homepage, including the scope and results of the monitoring and the extended participation procedure, plus a discussion forum. A factsheet could provide an initial summary of the respective topic. A documentation center could also improve transparency, a key objective in the work of the CEC and one that might support the greening of NAFTA.

**Third,** as a reinforcement of the analysis of ex-ante environmental assessment, **the Commission could publish lists of species, habitats and biotopes of trilateral concern** (lists already begun in the section “Biodiversity Conservation” and in the CEC Atlas). These lists could provide an analytic base to be included in the domestic SEA and EIA procedure. Even apart from the results of steps I and II in NAFTA’S GREEN IMPACT, the CEC could commission NAFTA EA on NAFTA’s impacts on (selected) trilateral species and environmental media, thereby creating recommendations to protect them. These recommendations could then be integrated into ex-ante assessments to facilitate voluntary cooperation from interested proponents of the projects and activities.

**Fourth, the Commission could assess how effectively and efficiently the steps and tasks in NAFTA’S GREEN IMPACT are advancing the greening of NAFTA.** The CEC could analyze, for example, to what extent the new information provided through ex-ante analyses really helps fill information gaps in identifying NAFTA’s impacts. Another research area for the CEC could be to identify the interaction between NAFTA’S GREEN IMPACT and other aspects of the CEC working program – the section on “Environment, Trade and Sustainability” in particular, but also other tasks such as those in “Pollutants and Health,” in the selected files from the citizen submission procedure, or those mentioned in memorandi of understanding developed by external partners and business associations.

This analysis could be part of the “Environment, Trade and Sustainability” section, of a NAFTA EA or of a Secretariat Report. The results could then influence the theoretical concept and the practical application of NAFTA’S GREEN IMPACT. Selected components of the tasks could thereby be adapted or further analyzed (for example through a Secretariat Report).

**Fifth, the CEC could work with NAFTA’S GREEN IMPACT and with several of its individual components.** The concept as a whole could be tested through pilot studies, which would improve the concept as well as the eventual implementation. In addition, the CEC could work with selected tasks even apart from the realization of NAFTA’S GREEN IMPACT, for example, through the development of the summaries and maps suggested in step I. These initiatives would contribute to the greening of NAFTA even though the whole concept may not be applied.

**Sixth, the CEC could create topic-related alliances of NGOs and business associations** (based on comments by Expert J, Expert M), thereby extending the reach of the non-governmental level. The Commission could promote the concept to NGOs, especially those who participated in the development of the NAFTA EA, and to the business sector. These public representatives might then advocate participation in NAFTA’S GREEN IMPACT within their respective groups. The associations could also serve as a way to make their members’ participation in the concept publically known and thus create an incentive for lasting

participation.

**In sum**, the CEC is the leading level in the concept of NAFTA'S GREEN IMPACT, due to its broad mandate set out in NAAEC and its opportunities based on the Council's approval. The Commission is the leading level in three of the five tasks (step I(a), (b) and III) and carries a similar amount of responsibility as the other levels in step II. In addition, the Commission can use its broad mandate and influence to support the successful implementation of the concept and its selected components.

## 8.5 Discussion and Challenges

Despite the opportunities that the NAAEC and its implementation provide for NAFTA'S GREEN IMPACT, there are still challenges to the concept that limit its implementation and prerequisites that must be in place for its implementation to be effective. Furthermore, further research is needed prior to the implementation of the concept.

### **Independent Variable: The Analytic Framework**

The Analytic Framework for Assessing the Environmental Effects of NAFTA is an independent variable in the process of greening NAFTA based on the concept of NAFTA'S GREEN IMPACT. The Analytic Framework provides the methodology for an ongoing analysis of NAFTA's environmental impacts and thus of the success of NAFTA'S GREEN IMPACT. The NAFTA EA is a fixed component of step III of the concept. On the one hand, this guarantees a constant application of the independent variable; on the other hand, it could invite the accusation of bias. An additional external evaluation, comprised of studies conducted apart from the concept and not by the CEC as leading institution, would increase the credibility of the results of the independent variable.

In step II in particular, the interaction of the information needed in the ex-post assessment and the information that could be available in the ex-ante assessment needs to be adjusted in order to improve the interaction and eventually the results of the concept. This adjustment may also include an adaptation of the Analytic Framework according to these new types of information exchange. Once again, the question of bias can be raised, especially when the Analytic Framework is adapted to fulfill the requirements of the concept of NAFTA'S GREEN IMPACT.

Additional external analyses – for example, separate ongoing studies conducted by experts or more neutral institutions such as the UN, studies based on other methodological frameworks such as those of the OECD and the European Union on ex-ante sustainability impact assessment of trade agreements, or approaches to environmental modeling and statistical evaluation – are highly recommended. Their usefulness, however, needs to be tested prior to the introduction of a new independent variable.

In sum, the closeness of the Analytic Framework to the concept of NAFTA'S GREEN IMPACT as an instrument of environmental assessment was regarded as both a strength and a weakness.

### **Lack of support of multi-level governance**

The concept of multi-level governance is less established in North America than in the European Union, where it has its origins, and its implementation powers in North America are



consequently rather weak. The NAAEC itself scarcely addresses aspects of intra-level cooperation (intersection according to topic (b) membership). The CEC as the international level does not hold any supranational powers, a difficult fact, since the Commission acts as the leading level in the concept. In North American environmental multi-level governance, intersections can often be found that are unilateral and advisory in nature, for example, in the role of the JPAC as unilaterally advising organ and the unilateral influence of the nation states on the CEC.

In addition, several elements such as the National and Governmental Advisory Committees exist as voluntary organs in the NAAEC, but are not necessarily implemented by the nation states and thus may not assume the roles the concept of NAFTA'S GREEN IMPACT assigns to them. The regional level is not always clearly defined and has not established cooperation mechanisms relevant for the concept yet. The regional level may be applied in areas of existing successful cooperation such as the border areas with their partly bilateral institutions, the International Boundary and Water Commission and the Border Environment Cooperation Commission. Thus the existence of a strong regional level is questionable in areas less influenced by transboundary cooperation.

Beyond the limits that can be found in the governmental levels, the commitment of the non-governmental may also be questioned. Experts pointed out the presently meager interest of the public in the work of the Commission; thus the concept may not necessarily be able to count on strong public reception, neither during the development phase nor during implementation, and especially not during step II(b), which involves extended public participation.

Despite the fact that NAFTA'S GREEN IMPACT is based on strong multi-level governance, it will most likely face resistance from the responsible levels of jurisdiction. These challenges might be addressed and resolved, however, by effective promotion of the concept, as it links different scopes of action of the CEC and supports North American environmental integration based on the cooperation of the responsible governmental levels.

### **Voluntary participation versus political requirement**

The concept of NAFTA'S GREEN IMPACT is purely based on voluntary participation. The CEC may develop the steps as a trinationally equal approach to an extended analysis. However, the Commission cannot force the different governmental levels to participate in them and to actually apply them. The best results could be achieved if all countries and levels would apply the extended version. However, as the experience of the Agreement on transboundary EIA shows, reaching an agreement that is also binding for all subnational levels is not easy. Therefore, this proposal can only be realized on a voluntary basis. The level that is responsible for conducting the environmental assessment can integrate it as a regular element in their individual regulations on environmental assessment. Alternatively, those responsible for the project could contribute to NAFTA'S GREEN IMPACT completely voluntarily.

Further research is thus required to identify – if possible – CEC best practice examples in which the nation states all voluntarily support a concept with their domestic powers to learn and to benefit from these success stories.

### **Linkages between SEA and EIA and NAFTA**

A central challenge in the concept is to identify if and to what extent a project, policy, plan or

program is related to NAFTA and, therefore, if and to what extent that part of the analysis should apply NAFTA'S GREEN IMPACT. According to which standards and criteria could the interaction between NAFTA and a project, policy, plan or program be identified in advance, as its SEA and EIA are ex-ante procedures?

As NAFTA'S GREEN IMPACT is based on the voluntary participation of the proponents and partly also of the responsible governance level, an essential key to the success of the concept is not to cause additional work and costs that will eventually show no effect on or relation to the concept. Thus the development of selection criteria, comprising inclusion and exclusion lists as well as clear requirements for the additional analytic section in the environmental assessment procedure of SEA and EIA, forms a relevant basis for building trust and for increasing motivation to participate in the concept.

### **Differences and lack of implementation of the types of environmental assessment on the domestic level**

NAFTA'S GREEN IMPACT builds on the existence of domestic and transboundary SEA and EIA and partly also comprises a trilateral SEA. However, the substantial differences in the domestic procedures on environmental assessment, including the types of environmental impact statements and responsible governmental authorities, may cause problems for the tasks and lead.

Concerning the SEA, the instrument is not equally established in all three countries, but rather confronts domestic differences that are even stronger than those concerning project EIA. Canada focuses on policies and programs, the US provides examples for policies, plans and programs, whereas Mexico focuses on plans and thus on the spatial level. In addition, no initiatives for a transboundary and common trilateral SEA exist; thus, no basis exists that can be amended by lists and guidelines. It cannot be taken for granted that the countries will develop the various types of environmental assessment in a general domestic context and even less certain that they will design them to fulfill the specific task of greening NAFTA. The information available through the SEA approaches can therefore be regarded as unilateral and bilateral, which throws the actual trilateral value of the information provided through SEA into question. However, the concept provides opportunities for relating the diverse types of the instrument of environmental assessment to NAFTA and its ongoing assessment, and the different steps and tasks may also be applied individually by the three countries according to their domestic settings and characteristics. Further research is required to identify the use and value of this isolated approach instead of the complete implementation of the analytic, adaptation and monitoring cycle.

### **Missing reference data in the NAFTA EA**

The problems concerning the missing data that is needed to completely identify the environmental impact of NAFTA cannot be solved immediately. The missing information cannot be gathered within a short period of time. Furthermore, not all missing data can be gathered through environmental assessment and the tasks presented here.

If the data is supposed to collate information on the relation between projects, policies, plans and programs and NAFTA, it would be necessary to actually include all new activities that will or might interact with NAFTA. This inclusion, however, is not very likely, as described in the previous paragraphs, and doubts about the general credibility of trade impact assessment will most likely continue to persist.

However, these gaps may be partly filled by frequently monitoring the first results of the NAFTA EA, which so far has not been done. Despite the fact that these initial studies were only developed between 2000 and 2008, they will provide valuable first ex-post reference data.

### **Lack of interaction between the Analytic Framework and domestic guidelines on environmental assessment**

So far, neither the Analytic Framework nor the present domestic regulations on EIA and SEA are designed to interact with one another. At this point, therefore, opportunities for interaction still need to be identified while the concept of NAFTA's GREEN IMPACT is further developed and tested. In particular, interactions need to be identified that address both the information that fits the methodology of the Analytic Framework and the information that the ex-ante EIA and SEA could provide (partly through extended procedures, partly in their original steps). This interaction will extend the thorough scientific analysis developed to assess NAFTA's impacts and link it to other elements of environmental assessment, thereby closing an interaction gap.

### **Limited number of studies**

So far, the CEC only developed 49 studies, focusing on sectors in which NAFTA would most likely cause strong negative environmental impacts. The studies, therefore, do not necessarily cover all sectors, or cover sectors with only a very few studies that might be relevant for the SEA and EIA. In sum, the basis for the summaries and their conclusions and recommendations as well as the maps is rather thin. However, the development of the summaries and maps could help identify these gaps and then allow the studies of the SEA, EIA and the future NAFTA EA to address and fill these gaps.

### **Administrative complexity and funding challenges**

The five tasks presented in the three steps of the concept extend the existing procedures for conducting environmental assessment; however, additional time resources are needed to apply them, plus further professional experience on the part of the governmental representatives as well as on the part of consultants for the studies and the proponents of the projects, policies, plans and programs, and an administrative integration into a domestically well-established process.

Thus, in addition to the requirements established in the concept, the CEC as the central leading level should also address and discuss questions concerning funding and incentives. Incentives such as labeling and marketing, as well as funding opportunities through tax reductions and international environmental foundations need to be explored as an additional part of the concept, so that participants benefit from their contribution to the greening of NAFTA. The generally spare budget of the CEC itself also limits the opportunities for developing and applying the concept; however, the Commission could identify the financial advantages that the proponents of the projects, policies, plans and programs could enjoy by identifying positive environmental impacts from whose increase the proponent would benefit (based on the general comment of Expert L, who pointed at CEC projects that help the business communities reduce their costs by being environmentally friendly). Participation in the concept could also be acknowledged through a publication on a topic-related part of the CEC homepage or through a CEC label (for

example “NAFTA approved”/ “CEC approved”<sup>126</sup>). This publication would also increase transparency for projects realized under NAFTA.

### **Lack of public and policy-maker support for greening NAFTA**

As experts pointed out, NAFTA no longer captures political or public interest. This apathy on the part of the public and NGOs poses a challenge, as the extended participation procedure requires a strong public interest that, at present, is not necessarily evident. Experts criticized, for example, the lack of involvement with the public in the CEC’s work and the lack of public interest. The political debates on the reduction of the CEC budget serve as an example for inadequate support on the policy level. The increasing influence of the Security and Prosperity Partnership in terms of environmental cooperation, as illustrated by the lack of cooperation on transboundary EIA, may also prove that the influence of the Commission has abated.

Therefore – and here the challenges are similar to those discussed with regard to multi-level governance – it is questionable whether the different governmental levels, including the public as non-governmental level, are sufficiently motivated to participate in the tasks and to actually demand the political application of the concept and its results. In addition, the lukewarm political and public support may limit the willingness of the Council to integrate the concept of NAFTA’S GREEN IMPACT and selected tasks into the CEC working program.

### **Language barriers**

The concept of NAFTA’S GREEN IMPACT encompasses three countries whose populations speak three different languages, without the unifying benefit of one common language. Language problems will doubtlessly arise, as they did during the international implementation of the transboundary EIA under the Espoo Convention. This language diversity poses the question of whether documents should be translated and if so, which ones, and who will pay for it?

At present, though many publications of the CEC and its homepage are trilingual, the studies of the NAFTA EA are not translated into all the three languages. The CEC could identify mechanisms to solve these problems, for instance, by developing a trilingual factsheet of the respective project, policy, plan or program in order to at least provide general information, and to accept comments on the respective activity in all three languages, thus guaranteeing transparency and equal participation approaches. At this juncture, the CEC performs the central role of international mediator. Country representatives and experts on environmental assessment who speak multiple languages could also be employed.

Despite the existing language barriers, the NAAEC implements the citizen submission procedure (Articles 14 and 15) that offers residents in all three countries the chance to file submissions in any North American country. Here, experiences with overcoming language barriers might provide best practise examples for NAFTA’S GREEN IMPACT, and the procedures could also interact in terms of language (e.g. through common country representatives, if applicable).

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<sup>126</sup> The opportunities and challenges involved in creating a general CEC label are varied and include the limited political and public awareness of the Commission (also illustrated by the sparse scientific attention the Commission has received so far). The advantages and disadvantages of a label will not be further discussed in the dissertation.

### **Limitation to projects, policies, plans and programs**

NAFTA'S GREEN IMPACT focuses on impacts caused by projects, policies, plans and programs. NAFTA, however, comprises other aspects as well, for example, foreign direct investment and services. The impacts of these aspects are not integrated into NAFTA'S GREEN IMPACT and are thus not represented in its approaches towards greening. However, as Canada has initiatives directed toward environmentally assessing Trade and Investment Cooperation Arrangements, further research could build these dimensions into the concept, too.

### **Update of the rationale for greening NAFTA**

The concept of NAFTA'S GREEN IMPACT is based on the need to green NAFTA, which is a result of the current analysis. Some of these arguments, however, may change, others may not. Whereas the proximity of the three NAFTA countries is a stable geographic fact, NAFTA may lose economic influence in general, the trade dependencies between the countries may decrease, and thus the pressure on the border areas may decrease as well. The rationale thus requires continuous updating. A provocative question could therefore be posed: Will the need to green NAFTA disappear, before NAFTA'S GREEN IMPACT produces scientifically valuable results? To answer this question, a constant monitoring of the trade flow among the three countries and the scope of its environmental impact is required. A shift from products to services may have a smaller environmental impact than an increase in oil exports from Canada and Mexico to the US. In addition, the trade flow may change less now that the liberalization process under NAFTA is completed. At present, no predictions concerning the rationale for greening NAFTA shall be made here.

### **Environmental impacts of other trade agreements**

In addition to NAFTA, the member countries signed further trade agreements that may also cause environmental impacts in these countries and in the North American hemisphere; however, these effects will not be addressed in NAFTA'S GREEN IMPACT. The concept is not designed as TRADE'S GREEN IMPACT IN NORTH AMERICA, which would address all impacts originating in all trade agreements including, among others, the WTO and the US-CAFTA-DR. Further research is required to identify to what extent the concept of NAFTA'S GREEN IMPACT could be extended by analysis to further trade agreements currently negatively impacting the environment in North America.

A transfer of NAFTA'S GREEN IMPACT to other trade agreements that are partly detached from NAFTA and its signatory countries is presented in the following sub-chapter.

## **8.6 Transfer of NAFTA'S GREEN IMPACT to further Trade Agreements**

Trade liberalization is an important component in the international economic cooperation. Thus the question of how and to what extent the concept of NAFTA'S GREEN IMPACT may be applied to other free trade agreements, partnerships, etc. (here within only referred to as trade agreements) needs to be explored. Additionally, NAFTA was regarded as a blueprint for subsequent free trade agreements, for example, the US-CAFTA-DR, the Free Trade Area of the Americas (FTAA, at this point no longer under development) and – as proven in terms of

environmental institutional cooperation – for the Canada-Chile Free Trade Agreement with its Agreement on Environmental Cooperation (CCAEC) (Agreement on Environmental Cooperation between the Government of Canada and the Government of the Republic of Chile 1997). Furthermore, economic cooperation between industrialized nations and Mexico as less-developed country – though not an undeveloped country (Expert M, Expert F) – may provide impetus for other trade agreements with a similar economic constellation among the signatory countries (Expert F).

Coining the term TRADE'S GREEN IMPACT, this chapter relates further trade agreements to the steps and tasks elaborated for the concept of NAFTA'S GREEN IMPACT, hereby discussing the possible opportunities and challenges of this transfer. The chapter draws examples from a variety of agreements to illustrate the differences in the international trade regime, thus emphasizing the variety of challenges that a possible transfer entails. To test a transfer of the concept is also relevant, as regional trade agreements become increasingly important due to the negotiation challenges of the recent WTO negotiations (based on the general comment of Expert J).

### 8.6.1 Status Quo and Rationale for Greening Trade: How green are Trade Agreements?

At present, the green status quo of trade agreements is difficult to determine. Some countries conduct ex-ante environmental and sustainability impact assessments prior to the implementation of the trade accords; the European Union, for example, has done this with regard to its African-Caribbean-Pacific economic partnership (ACP, Podhora 2007a: 17 ff), and so have Canada and the US. In general, these studies examine a variety of trade agreements to gain initial insights into the anticipated environmental and sustainability impacts (see mainly European Commission Trade 2009: Assessments, Foreign Affairs and International Trade Canada 2009: Negotiations and Agreements + links, Office of the United States Trade Representative 2009: Bilateral and Regional Trade Agreements). These ex-ante assessments, however, often lack a consistent monitoring procedure to identify to what extent the predicted impacts do take place and whether effects also occur that were not identified prior to the agreement coming into force (Podhora 2007a: 20). Despite the lack of monitoring, the ex-ante assessments provide preliminary information on the expected green status quo of the respective accord.

In contrast, other countries and trade accords do not necessarily require ex-ante assessment, when there is no explicit information provided on the effects of the agreements. In addition, no information can be drawn from an ex-post assessment, as NAFTA is the only trade agreement that conducts this type of assessment.

#### **The need to green the respective trade agreement**

Similar to NAFTA, it is important to identify whether a need to green other trade agreements actually exists. The same rationale provided for NAFTA is applied in this discussion.

#### ***A) The trade agreement provokes negative environmental impacts.***

As the ongoing environmental assessment of NAFTA shows, NAFTA generates negative environmental impacts. Taking NAFTA as an model for subsequent trade agreements, it can be

assumed that other trade agreements also create this type of impact. If an ex-ante assessment exists for the respective trade agreement, it will support this assumption with information on negative environmental impacts identified during the course of the study.

***B) Strong trade dependencies between the signatory countries of the trade agreement demonstrate the need for the agreement to be green, as it is an important trade accord for the geographical region in question.***

NAFTA is the most important trade agreement for the North American continent and is consequently related to a high number of negative environmental impacts. The economic influence of other trade agreements for a specific geographical area thus needs to be identified. The US-Jordan Free Trade Agreement does not have a strong economic impact on the US (in 2008, Jordan was not among the US's top 5 trading partners, which accounted for about 65% of US trade, see Chapter 3.2.1), but it had a bigger impact on Jordan (for example 13.5 % of Jordan's output is exported to the US, which is Jordan's third biggest trading partner, WTO 2009: Trade Profiles Jordan). Whether to apply the concept to Jordan and its geographical area rather than to the US is thus a matter to be considered; however, it needs to be determined if the environmental impact is actually attributable to the economic power generated by the trade agreement or to other elements of the accord, as pointed out by Expert N.

***C) The direct proximity of the signatory countries of the trade agreements means that negative environmental impacts accumulate in the border areas and affect common ecosystems, natural resources and species.***

Trade agreements have different regional foci. The US-CAFTA-DR Agreement, for instance, has a strong geographical focus, as it encompasses the Central American countries plus the US, with only Mexico in between as a geographical barrier. However, trade among the Central American countries themselves – with less than 10% of trade coming from the most important trading partner of the region<sup>127</sup> – is weak in comparison to the trade of individual countries with the US (WTO 2009: Trade Profiles Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua). Thus in these cases, the impacts on the border areas and the common ecosystems are rather small. However, further research is required, for instance on transportation mode and quantity, to identify exactly what kind of impact the US-CAFTA-DR is having on the border

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<sup>127</sup> Costa Rica (38.2 % exported to the US/ rank 1; 38.2 % imported from the US/ rank 1; with 4.1 % exported to Nicaragua, the most important Central American export partner/ rank 4; no Central American country among the top 5 import countries),  
 Dominican Republic (40.2 % exported to the US/ rank 1; 44.8 % imported from the US/ rank 1; no Central American country among the top 5 export/ import partners),  
 El Salvador (20.3 % exported to the US/ rank 2; 30.6 % imported from the US/ rank 1; with 23.1 % exported to Guatemala as the biggest Central American export partner/ rank 1; with 9.4 % imported from Guatemala as the biggest Central American export partner/ rank 3),  
 Guatemala (39.4 % exported to the US/ rank 1; 36.7 % imported from the US/ rank 1; with 12.6 % exported to El Salvador as the biggest Central American export partner/ rank 2; with 4.7 % imported from El Salvador as the biggest Central American export partner/ rank 5),  
 Honduras (42.8 % exported to the US/ rank 1; 40.0 % imported from the US/ rank 1; with 9.2 % exported to Guatemala as the biggest Central American export partner/ rank 3; with 8.3 % imported from Guatemala as the biggest Central American export partner/ rank 2),  
 Nicaragua (31.2 % exported to the US/ rank 1; 23.0 % imported from the US/ rank 1; with 14.1 % exported to El Salvador as the biggest Central American export partner/ rank 2; with 8.6 % imported from Costa Rica as the biggest Central American export partner/ rank 3).

areas in these Central American countries. As in Argument B on trade dependencies, the actual trade-related source of the environmental impact needs to be identified, which might not be economic power (Expert N).

In contrast to the Central American countries, the signatory countries of the US-Jordan Free Trade Agreement do not even share the same continent. Thus trade impacts do not necessarily accumulate, as they do not impact the same areas, nor do they have a strong impact on the border areas due to an increase in traffic, among other things.

***D) Missing analyses and weaknesses in the analyses of the environmental effects might hide additional negative impacts.***

As the trade agreements often lack complete ex-ante and ex-post analyses of their green status quo, it is difficult to identify the actual environmental impact. The Australian Department of Foreign Affairs and Trade<sup>128</sup> refers in its section on Trade and Environment to environmental aspects related to the WTO (Australian Government, Department of Foreign Affairs and Trade, no date: Trade and Environment), but not to environmental reviews of its trade agreements. Additionally, the homepage discussing the various trade agreements does not list any environmental reviews (id.: Free Trade Agreements). Thus it may be assumed that neither ex-ante nor ex-post assessments are an established part of Australia's trade policy or that they are kept confidential, and thus that the results are not available for public or institutional use.

Moreover, in the event that a country does conduct ex-ante assessments, they may face doubts and challenges similar to those experienced during the NAFTA EA regarding methodological approaches and a lack of monitoring procedures. As with NAFTA, this missing information substantiates the argument that the respective trade agreements should be greened.

The results of the NAFTA EA cannot be transferred scientifically to other trade agreements, as the studies of the NAFTA EA relate to the North American hemisphere with its natural, economic, social, institutional and political characteristics. Likewise, the environmental impacts in the border areas caused by transportation that were identified in Case Study 2 cannot be transferred to other border areas, due to regionally specific environmental characteristics such as water scarcity and desert flora and fauna.

***E) The current lack of activities geared toward the greening of trade agreements reveal a general demand for the need to green them.***

In the past fifteen years, environmental issues have come to play an important role in the world trade system, as reflected in the WTO Trade and Environment Committee (WTO, no date: The Committee on Trade and Environment) and in environmental chapters and accords in trade agreements such as the Canada-Chile Agreement on Environmental Cooperation. These initiatives could possibly facilitate the transfer of NAFTA's GREEN IMPACT to other trade agreements, especially environmental cooperation accords in which the environmental agreement also refers to the ongoing environmental assessment of the respective trade accord, as established in the Canadian-Chile Agreement (Agreement on Environmental Cooperation between the

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<sup>128</sup> Australia was selected automatically as an example to illustrate the status quo of other countries without any further scientific research or requirements.



Government of Canada and the Government of the Republic of Chile 1997: Art. 10.7(d)).

Despite these initiatives, no process specifically related to the key statement on greening NAFTA and greening trade accords could be identified in the research for this dissertation. Argument E therefore needs further work before being applied to the rationale for the need to green trade agreements.

***F) Greening the respective trade agreement has a positive impact on the regional environment in general.***

Similar to Argument C, this argument applies to a greater extent if the trade agreement plays an essential role in the region, either economically or environmentally. Here again, further information is required before this argument can be transferred to the rationale for greening trade agreements.

**In conclusion**, compared to the rationale for greening NAFTA, the arguments for the need to green further trade agreements are only partly convincing. For a complete line of argument, the rationale lacks the key information that is usually provided in ex-ante and ex-post environmental assessments.

**Requirements for transferring the concept of NAFTA'S GREEN IMPACT to other trade agreements**

Despite the incompleteness of the arguments presented regarding the transfer of the rationale, the requirements for a transfer of NAFTA'S GREEN IMPACT are similar to those set out in Chapter 8.1.3:

- to identify the green status quo of the respective trade agreement on a wide scale, on an ongoing basis and as specific reference data (based on Argument A),
- to reduce the negative environmental impacts of the respective trade agreement (for example, those identified through the ex-ante assessment) and to prevent possible negative environmental impacts still undetected due to missing reference data or analyses (based on Arguments A and D),
- to identify positive environmental effects of the respective trade agreement in order to increase them and thereby improve the environmental performance of the trade agreement (based on criteria for greening trade, Chapter 2),
- to pay special attention to common natural resources, ecosystems, species and regions such as border areas, as environmental impacts are likely to accumulate there or have greater transboundary effects (if applicable, based on Arguments B and C),
- to promote activities that implement the greening of the trade agreement (based on Argument E), and thus
- to have, in sum, positive environmental effects on the common environment beyond the respective trade agreement (based on Argument F).

Due to the absence of vital information and conviction detectable in these arguments, a complete and almost identical transfer of the rationale as presented here, is a weak point in the transfer of

NAFTA'S GREEN IMPACT. Further research on the trade agreements is therefore required to identify the rationales and the requirements in each case.

### 8.6.2 Relation between Trade Agreements and Types of Environmental Assessments

The three types of environmental assessment must also be reflected in the transfer of the concept. However, the imperfect transfer of the rationale also affects the links between trade and the different types of environmental assessment.

In NAFTA, the NAFTA EA relates trade liberalization to the EIA and SEA in a domestic and transboundary context, as illustrated in Chapter 8.2. However, as long as neither ex-ante nor ex-post assessments exist, the relationship between the effects of the trade agreement and the three types of environmental assessment are difficult to identify and thus are difficult to build on.

The ex-ante assessments of trade agreements could provide a basis for an initial ex-ante connection to the different types of environmental assessment. The Handbook of the European Commission (European Commission, External Trade 2006), as an example of an existing ex-ante trade sustainability analysis, links trade assessment with other types of environmental assessment and relates both to trade liberalization (see Chapter 8.2). Further research is necessary, however, to identify what this statement means in practice and to what extent ex-ante methodologies such as the Handbook of the European Commission can also be used for an ex-post assessment.

In addition, the extent to which either the existing/ applied ex-ante assessments or the existing NAFTA Analytic Framework could be applied to the respective trade agreement in order to determine the effectiveness of TRADE'S GREEN IMPACT needs to be investigated. As the Analytic Framework includes specifically North American characteristics such as the CEC, an adaptation of the Framework to the respective trade agreement and partners, in order to identify the impacts related to the liberalization process, would be required.

In addition to the open question of the environment-trade link in the respective trade agreement, the signatory countries require project EIA and SEA for policies, plans and programs with different foci on the domestic level. Though a high number of countries have EIA procedures, the SEA is a rather new instrument in comparison and might not be as well-established institutionally or in its application as the project EIA.

The transboundary dimension of EIA and SEA is especially relevant when the signatory countries are direct neighbors or share environmental media such as water bodies and migratory species. Furthermore, the cooperation in relation to transboundary EIA is not very well established and even less politically accepted in terms of transboundary and common SEAs – a state of affairs that is also potentially challenging.

The integration of the ongoing NAFTA EA into the NAAEC mainly stemmed from the regional proximity of the signatory countries and their dissimilar economic situations, as it was thought that Mexico would turn into a pollution haven and all countries would lower their domestic environmental regulations in order to attract business. It was also anticipated that companies would move to Mexico due to its lower environmental standards and regional proximity (marketability). Therefore, among countries that have similar economic situations, the problems faced by the NAFTA countries may not occur, as the nations in question would not expect to

lose business to countries with weaker environmental and social standards.

**In sum**, a transfer of NAFTA'S GREEN IMPACT will face a variety of challenges related to all three types of environmental assessment. Further research is necessary for each trade agreement to identify the perspectives on environmental assessment appropriate to the specific accord.

### **8.6.3 Multi-level Governance related to the Transfer of NAFTA'S GREEN IMPACT to further Trade Agreements**

The structure of multi-level governance in TRADE'S GREEN IMPACT is weak, as the interaction of the different governance levels in NAFTA'S GREEN IMPACT relates particularly to the NAAEC and to the institutions and organs that the agreement creates, such as the CEC and the Joint Public, National and Governmental Advisory Committees, and the mandates it assigns to them. The NAAEC and the CEC are unique entities in the trade system; thus a framework for reinforcing a transferred concept most likely does not exist. Examples of environmental multi-level governance in other free trade agreements are listed and discussed in the following paragraphs.

#### **(a) Type of jurisdiction**

NAFTA'S GREEN IMPACT is based on the existence of the NAAEC, which includes the various types of environmental assessment as instruments. However, comparatively few agreements on environmental cooperation related to trade agreements exist; neither a general nor a task-specific jurisdiction to support the concept can be taken for granted.

Thus further research is needed to identify if and how the current environmental chapters of other trade agreements address the types of multi-level governance. It is expected that at most, the rudimentary elements of a general environmental type of jurisdiction (multi-level governance type I) are to be found. However, only more research will determine if the existing environmental cooperation is flexible enough to support the development and implementation of the concept of TRADE'S GREEN IMPACT as the NAAEC allows it for NAFTA'S GREEN IMPACT.

#### **(b) Intersection of membership**

The intersection of the membership is also limited in other trade agreements. As other agreements do not necessarily have such a strong environmental cooperation accord as NAAEC, organs such as an international environmental commission similar to the CEC with its extensive structure, common environmental self-commitment on the national and subnational level, and advisory committees such as the non-governmental level are most likely absent. Horizontal, vertical and intermediary intersections in particular need to be identified for each trade agreement. The topic membership, however, is probably missing or incomplete.

#### **(c) Unlimited number of levels of jurisdiction**

Due to the frequent absence of an extensive environmental cooperation agreement, the levels of jurisdiction in other trade agreements are most likely limited in their degree of environmental cooperation. Here, also, the missing element of multi-level governance – or missing governance levels – is particularly apparent.

#### **(d) Design**

Each trade accord defines individual parameters for the environmental cooperation of its

signatory countries. Thus specific research is required to describe the relationship of the legal framework and its actual implementation in each trade agreement and again to determine if the existing environmental framework is flexible enough to develop a concept of TRADE'S GREEN IMPACT.

**In sum**, none of the three governance types – type I, type II, or semi-type – can be applied unproblematically to other trade agreements, as various levels required to form multi-level governance are probably missing in the environmental cooperation related to trade agreements. If the trade agreement is connected to multi-level governance despite these missing levels, the most likely type is type I, which is rather fixed and is not suitable for NAFTA'S GREEN IMPACT or TRADE'S GREEN IMPACT. This assumption that the required levels will not be present is based on the fact that the NAAEC provides extensive opportunities for the implementation of the agreement via the creation of the Commission, along with the CEC Council to approve Commission decisions, a wide choice of tasks for the individual working program, the Secretariat to execute the working program, and a fixed budget. This is a strength of the NAAEC that enables North America to work with the concept of NAFTA'S GREEN IMPACT, but that may not be a common feature in other environmental cooperation accords related to trade agreements.

A detailed analysis of the individual environmental chapters of the respective accord is also imperative. However, as NAAEC and the CEC are often regarded as unique entities at the nexus of environment and trade, it can be presumed that the concept of multi-level governance presented here is also unique. It should be noted that the CEC, one of the leading institutions in the concept of NAFTA'S GREEN IMPACT, was not consulted in the negotiations over the Free Trade Areas of the Americas and the US-CAFTA-DR (Expert M), a fact that implies that the experiences of the Commission with the concept of NAFTA'S GREEN IMPACT may have limited influence.

#### 8.6.4 TRADE'S GREEN IMPACT – A transfer of NAFTA'S GREEN IMPACT to other Trade Agreements

The basis for a transfer of the concept of NAFTA'S GREEN IMPACT to other trade agreements is weak and is based on assumptions rather than on facts. First, the rationale for greening trade agreements could not be confirmed due to missing information. Second, links among the types of environmental assessment and other trade agreements could not be identified in detail because of incomplete ex-ante and ex-post analyses. Third, NAAEC and the CEC are unique institutions in the trade liberalization process, which makes the existence of multi-level governance at the environment-trade nexus of other trade agreements questionable.

When the individual steps and tasks are examined more closely, the weakness of a transfer becomes even more obvious. **Step I (a) and (b)**, with its creation of topic-related summaries and maps, builds on the existence of the studies of the NAFTA EA to provide information to the CEC as executing institution. Here it must be identified to what extent the information provided in the ex-ante studies for several trade agreements could be used as a basis for the summaries and maps. These studies and their methodological background might be adapted in their methodology to form a basis for the summaries and maps. In addition, it should be determined if other domestic and international institutions could take the lead for the development of step I; a possibility is the EU, which is always the responsible institution for conducting Sustainability

Impact Assessments for trade agreements between the EU and other trading partners.

**Step II (a) and (b)** refers to the domestic and transboundary EIA and SEA. Here, the question of whether all trading partners have legally implemented these instruments and actually apply them successfully needs to be examined. It is assumed that the more established the instruments are on the domestic level, the more willing the nation states are to extend them with a trade-related component. However, this situation poses organizational challenges: How are the exclusions and inclusions developed, how are the processes of extended public participation and governmental consultation promoted, and how is the expert pool created - if not by a superior institution?

The monitoring in **step III** is based on the ongoing trade EA. As ex-post assessments are usually missing and monitoring is not a consistent part of existing ex-ante trade assessments, there are few opportunities for the results of step II to be monitored and fed back into the analytic, adaption and monitoring cycle of the respective trade agreement.

In addition to the methodological challenges of the steps, the concept of TRADE'S GREEN IMPACT also faces **political challenges**. As very few countries have established trade-related assessments, it is a matter of speculation whether a political interest in analyzing and eventually greening individual trade agreements and applying the concept of TRADE'S GREEN IMPACT actually exists.

To conclude, central methodological and political elements necessary for the establishment of an analytic, adaptation and monitoring cycle to green trade agreements are missing. However, experiences already gained from the efforts of the CEC could be transferred, a possibility that should be used frequently in other trade agreements and especially in negotiated accords.

## 8.7 Conclusion

The concept of NAFTA'S GREEN IMPACT is a theoretical analytic, adaptation, and monitoring cycle that links the diverse types of environmental assessment in order to contribute to the greening of NAFTA. Variations in the domestic systems and thus inadequate instrumental reinforcement on the national level, as well as weak institutional interaction of the levels of jurisdiction and memberships and a lack of political and public support for the CEC and its work would limit its successful implementation.

The various components of the concept – the need for greening NAFTA, the interaction of environmental assessment and trade liberalization and multi-level governance – are clearly linked to the NAAEC and thus to NAFTA and cannot be transferred without further ado to other agreements. On the contrary, an initial transfer has identified a number of problems and challenges related to such a transfer.

Rather than being a strategic concept that is implemented in its entirety, therefore, NAFTA'S GREEN IMPACT is mainly a theoretical model, which provides impulses and thoughts concerning individual steps for greening NAFTA, and concerning the relation of environmental assessment to NAFTA and to multi-level governance in North America.



## 9 Final Conclusions of the Dissertation

This dissertation analyzes the opportunities that the instrument of environmental assessment provides for the greening of the trade agreement NAFTA based on multi-level governance. It thereby develops the concept of NAFTA'S GREEN IMPACT as an analytic, adaptation and monitoring cycle. This scientific research addresses innovative topics for analyses and approaches to environmental multi-level governance and trade-related aspects of different types of environmental assessment. This concluding chapter discusses the actual importance of key elements of the research and connects the central research questions posed in chapters 1 and 2 to the hypothesis.

### **NAAEC and environmental cooperation related to NAFTA**

For more than two decades, free trade has been an increasingly important topic economically, environmentally and socially, receiving substantial political and public attention and concern. That the topic is of international importance can be inferred from the variety and scope of international trade cooperation initiatives among the countries. Environmental aspects have been continuously and increasingly integrated into these trade agreements, for which NAFTA has been a central reference point.

The existence of NAAEC as a parallel agreement to NAFTA seems to provide a stable basis for environmental cooperation in general, and for environmentally sensitive trade agreements and a green NAFTA in particular. However, the lack of interaction between the NAAEC and the NAFTA and between their two Commissions, the CEC and the Free Trade Commission, in the practical implementation of the NAAEC clearly shows that opportunities for greening NAFTA in general are being passed up, particularly in relation to the types of environmental assessment. The signatory countries, through their cold reception of the CEC and the assistance it could provide in greening NAFTA, have politically limited any activity realized under the auspices of the NAAEC and related to the CEC.

Finally, despite the importance of trade liberalization, the future international relevance of trade agreements needs to be questioned. Especially in the industrialized countries, security and energy issues have increasingly gained importance (as illustrated by the creation of the Security and Prosperity Partnership between Canada, the US and Mexico) and thus occupy the center of political and scientific attention. To a certain extent, the wave of interest in trade liberalization is abating, which most likely means that less attention will be paid to its environmental impacts and to the opportunities that trade agreements could provide for environmental cooperation of the signatory countries and environmental improvement in these countries in general.

### **Environmental assessment as part of the NAAEC**

The instrument of environmental assessment plays a prominent role in the NAAEC, as it is mentioned three times: on the domestic, the transboundary and the NAFTA-related level (NAAEC Art. 2.1(e), 10.7 and 10.6). The NAAEC explicitly refers to responsibilities and tasks for the CEC and the nation states as well, covering the wide range of possible activities created under the auspices of the NAAEC such as the establishment of recommendations, the development of transboundary EIA, the utilization of innovative methodological approaches

concerning the NAFTA EA and domestic self-commitment concerning the national aspects of the instrument. The different types of integration, the relations to governmental responsibilities and mandatory assignments as well as voluntary commitments, and especially the practical implementation of the NAAEC Articles illustrate the possibilities that the NAAEC and the CEC can provide for the implementation of the NAAEC content. The influence the CEC Council and thus the nation states can have on the work of the CEC is apparent as well. Despite the limitations that the CEC faces politically as well as socially, this range of opportunities reinforces any planned activities related to the three approaches of the instrument and thus also to NAFTA'S GREEN IMPACT.

### **Environmental assessment in a NAFTA-related trade context**

The instrument of environmental assessment has continuously developed and gained importance in the past forty years. A high number of countries integrate diverse types of the instrument on various governmental levels. It mainly addresses project EIA and recently also SEA for policies, plans and programs in a domestic and partly also a transboundary context. The SEA also became relevant to the environment-trade links through ex-ante and ex-post assessments, which view trade agreements as a policy (Trade SEA). However, especially when looking at the SEA for policies, plans and programs and project EIA on the one hand – both in a domestic and transboundary context – and trade environmental assessment on the other hand, the missing interconnections among the types of environmental assessment become particularly obvious. Even in the NAAEC, NAFTA's side agreement, which includes domestic, transboundary and NAFTA-related types of environmental assessment, the exact relationship between the instrument and trade liberalization is only addressed in the NAFTA EA. In addition, neither the domestic nor the transboundary approaches are regarded as supporting the NAFTA EA. The concept of NAFTA'S GREEN IMPACT thereby relates trade liberalization and its environmental impacts to the environmental assessment of projects, policies, plans and programs, thereby incorporating different levels of the instrument into the concept.

It can be challenging, however, to integrate the trade dimension into the project EIA and the SEA for policies, plans and programs (apart from Trade SEAs). Unlike recent discussions with a rather narrow focus on impacts on climate and biodiversity in the conduction of EIAs and SEAs, trade is a wide-ranging topic that is difficult to capture in all its dimensions, and thus also in its explicit relationship to a project, policy, plan or program. Extensive scientific support is required to develop topic-related approaches, for example, in cooperation with international and governmental institutions such as the CEC, the OECD and the European Union.

### **Greening NAFTA via the concept of NAFTA'S GREEN IMPACT**

Though environmental aspects of trade liberalization and environmental cooperation of the signatory countries have gained importance in the past decades, the focus has mainly centered on accompanying multilateral environmental agreements and trade restrictions concerning specific products. Methodological initiatives intended to green trade agreements in order to increase their environmental performance, however, are comparatively scarce. Though ex-ante trade assessments and the ex-post environmental assessment of NAFTA aim to identify the actual environmental and sustainable impact of the agreement, the actual focus lies on the provision of



information rather than on the political integration of the results in terms of an environmental and sustainable adaptation of the trade agreement. The development of a concept based on an explicit instrumental cycle provides a valuable support for the use of the results of the assessments, as well as for the provision of additional information on the environment-trade linkage. NAFTA'S GREEN IMPACT is intended not so much to create an explicit and flawless analytic cycle that effectively greens the trade agreement, as to identify interactions among the various types of environmental assessment as they are integrated into the NAAEC. This measure would close analytic gaps, improve the adaptation of projects, policies, plans and programs by reducing the negative and increasing the positive impacts, and contribute to the greening of the trade agreement and effective monitoring of its results. In addition, the cycle will raise awareness concerning NAFTA's environmental impacts on a smaller scale, at the project and regional level, but also on the policy level.

Additionally, as pointed out in the previous paragraph, the shift of political attention away from trade liberalization to more current issues of international concern may limit motivation to employ NAFTA'S GREEN IMPACT and to engage in the further development of the concept. In addition, as the concept is institutionally embedded in the NAAEC, setting limitations for the CEC may also impact how the general ideas of the concept are received.

Apart from the concept for greening trade agreements, many elements are still missing concerning the trade-environment link and the successful implementation of measures to green the liberalization process. The question is, however, if there is enough political and public interest, including funding, to investigate this topic.

### **Environmental multi-level governance in North America**

Multi-level governance originated in the political development of the European Union and has been recently extended to other types of international, national, regional and local cooperation in other countries and continents. The focus of this dissertation on the NAAEC provides a secure basis for analyzing environmental multi-level governance in North America. The key innovative elements of the NAAEC are mainly found in its transparent and participatory approach, where explicit references to multi-level governance are seldom. However, the substantial participatory opportunities created by the NAAEC for the subnational and non-governmental levels in relation to the scope of the NAAEC reveal a viable element of multi-level governance.

Referencing the models of Marks and Hooghe, with their fixed type I and their flexible type II of multi-level governance, and applying these to the NAAEC in general and the types of environmental assessment in particular, wide range of opportunities that the environmental agreement provides for multi-level governance becomes clear. A further specification of Marks' and Hooghe's key items emphasizes these opportunities, for example, when the item "interaction of membership" is parsed into horizontal, vertical and intermediary opportunities for intersection. The result of this extended analysis is the creation of the semi-type of multi-level governance, which combines elements of both types I and II: The "semi-type" usually has the legal background usually found in the fixed type I, but the implementation of this fixed framework is rather flexible and is thus related to type II. This special characteristic mainly results from the opportunities presented by the CEC Council. For the CEC working program, the Council may approve almost any activity within the wide scope of the NAAEC.

Thus the concept of NAFTA'S GREEN IMPACT is based mostly on the semi-type of multi-level governance, as the various types of environmental assessment relate to and are applied on distinct governmental levels. The concept thereby assigns tasks and activities to the different levels that lie within the scope the NAAEC provides for them. The CEC, as a superior institution related to all three NAFTA signatory countries, is a key element here. It is the leading institution with regard to performing certain tasks in the concept of NAFTA'S GREEN IMPACT and the ongoing assessment of NAFTA. However, the lack of political support for the CEC is once again a limiting factor here.

### **Environmental assessment as a timely and internationally recognized approach**

One of the general questions that should be asked concerning NAFTA'S GREEN IMPACT is whether or not a purely environmental concept is still relevant at a time when sustainability impact assessments are in use (for example: EU impact assessment in terms of trade in the European Union,, workshops such as OECD's "Sustainability Assessment Methodologies" and its report on Conducting Sustainability Assessments, and training courses such as "Evaluation of Sustainability" by the Research Institute for Managing Sustainability). Several central factors limit the extension of the concept of NAFTA'S GREEN IMPACT, however. Initial steps toward an extension of the purely environmental analysis have already been taken: The Analytic Framework includes some social elements, and several case studies of NAFTA also address social impacts beyond their purely environmental scope. However, it is still a long way to go before a trilateral NAFTA'S SUSTAINABILITY IMPACT concept can be realized, as the following two examples demonstrate.

First, the North American Agreement on Labor Cooperation and its Commission for Labor Cooperation do not have the mandate to conduct labor and social impact assessments, respectively, in relation to NAFTA (no requirement to consider the labor and social effects of the trade agreement on an ongoing basis exists). This fact dampens political support for extending the NAFTA EA to include a NAFTA Sustainability Assessment. Second, at present, though preliminary steps have been taken on the policy level, no counterparts to sustainability impact assessment on the project level could be identified. An extension of the project EIA to a project sustainability impact assessment would be required to complete the cycle in NAFTA'S SUSTAINABILITY IMPACT. The international acknowledgement environmental assessment has received in the past forty years, and the development and specification of the diverse types of the instrument including the initial phases of sustainability assessment, clearly indicate the potential for the next phases of NAFTA'S GREEN IMPACT. Its development, however requires additional research as well as political support.

**In sum,** the analysis showed that the present integration of the instrument of environmental assessment into the NAAEC does not contribute to the greening of NAFTA as set out in the key statement of the dissertation. However, the NAAEC and its implementation provide an extensive scope for the instrument to actually contribute to the greening of NAFTA, as the concept of NAFTA'S GREEN IMPACT illustrates. The concept emphasizes and combines the special characteristics of environmental cooperation related to NAFTA: The NAAEC as background agreement; the existence of multi-level governance within the NAAEC, including the creation of specific institutions and organs such as the CEC and its advisory committees; the existence of three types of environmental assessment included as a part of the NAAEC and in a

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comparatively prominent role as instrument; and the environment-trade linkage as a task for the NAAEC and the CEC working program. Thus the transfer of the concept to other trade agreements is limited due to the presence of innovative and unique elements tailored to the NAFTA region.

NAFTA'S GREEN IMPACT can provide additional information on the environment-trade linkage. However, it requires the development of details concerning trade-related aspects of projects, policies, plans and programs and needs to be tested in pilot cases to identify additional opportunities and challenges. Additionally, it requires support from policy-makers regarding the further development of the concept, as well as from the governmental authorities who conduct the studies and the proponents who initiate the environmental assessment with their proposed activity. As successful development and implementation offers a wide range of opportunities, the concept of NAFTA'S GREEN IMPACT faces many challenges in all of its discrete steps.



## 10 Summary

The economic and political relevance of trade liberalization and, with it, the number of international trade agreements, has greatly increased in the past 15 years. Trade liberalization aims to increase the trade flow of products, services, etc. among the member countries, mainly in order to stabilize the signatories economically. The North American Free Trade Agreement (NAFTA) of 1994, ratified by Canada, the US and Mexico, can be seen as a milestone in the linking of trade and environmental issues (Chapter 5). As NAFTA was the first free trade agreement signed between an industrialized and a less-developed country (Chapter 3), environmental and social issues became political topics during the NAFTA negotiations. Largely to assuage public concerns, NAFTA was supported by parallel agreements, chiefly the North American Agreement on Environmental Cooperation (NAAEC) (Chapter 6) as the environmental counterpart to NAFTA.

The **NAAEC** creates the framework for trinationally equal environmental cooperation among the three signatory countries. The agreement mainly focuses on fundamental conditions for cooperation as well as on general tasks related to trilateral environmental protection. It includes Secretariat Reports such as environmental analytic instruments and Citizen Submissions on Enforcement Matters. The NAAEC does not focus on trilateral environmental harmonization and only touches on the development of specific instruments. NAAEC gave birth to the Commission for Environmental Cooperation (CEC), charged with promoting the environmental objectives of the agreement. The CEC consists of a Council, a Secretariat and a Joint Public Advisory Committee (JPAC).

The NAAEC creates four key governance levels. (1) The Commission is the international trilateral institution that provides environmental recommendations and analyses. It fosters cooperation among the signatories, but does not have any supranational powers and is thus advisory in nature. (2) The nation states influence the work of the CEC through their participation in the Council, which is made up of the top domestic environmental representatives. (3) The subnational level plays a voluntary role and may – if integrated through the Governmental Advisory Board – give advice to the nation states in a NAAEC-related context. (4) The public advises and supervises the CEC as well as the nation states through various participation mechanisms.

Although the NAAEC and its Commission are considered “NAFTA’s environmental watchdog,” they do not primarily focus on NAFTA and the environment and trade links. NAAEC includes the environment-trade dimension in several of its articles, which led to the creation of the CEC working section “Environment, Trade and Sustainability.” Due to its parallels with NAFTA, the NAAEC is completely independent and detached from the trade agreement and has no powers to influence it. Furthermore, the CEC seldom cooperates with the NAFTA Free Trade Commission as its economic counterpart (Chapter 6).

Though the NAAEC barely mentions environmental instruments, the idea of **environmental assessment** is a significant exception and thus forms the core of this dissertation (Chapter 7). The NAAEC mainly refers to aspects of environmental cooperation without focusing on specific instruments, but it mentions environmental assessment three times, thus giving it a comparatively

prominent role. In general, the main objective of the instrument is to evaluate the environmental impacts of a specific project (project EIA), or of a plan, policy and program (Strategic Environmental Assessment SEA) in a national and transboundary context (transboundary EIA and SEA). The assessment focuses on diverse environmental media (water, soil etc.) and on mitigating negative effects through appropriate measures (Chapter 4). The state of research showed that scientific analyses had barely addressed the instrument in a NAFTA-NAAEC-related context.

The dissertation is based on the **hypothesis** that the interaction between NAFTA and the instrument of environmental assessment as included in the NAAEC contributes to the greening of the trade agreement. The research follows three central steps:

- (1) The dissertation analyzes multi-level governance as part of the NAAEC and the opportunities for greening NAFTA contributed by the NAAEC.
- (2) The research focuses on multi-level governance as it is connected to the three types of environmental assessment and on the impacts of the instrument on greening NAFTA. It thereby analyzes the instrument with regard to its integration into NAAEC and its practical implementation.
- (3) Based on the analysis of steps (1) and (2), the dissertation develops the concept of NAFTA's GREEN IMPACT. By using multi-level governance as a support for greening NAFTA, the concept utilizes the opportunities for greening NAFTA that environmental assessment offers.

The dissertation analyzes these governance levels based on the **theory of Marks and Hooghe (2004) on multi-level governance** (Chapter 2). Their concept has four dimensions –the type of jurisdiction, the degree of intersecting membership, the level of jurisdiction and the degree of the flexibility of the design. Analysing these dimensions, Marks and Hooghe identified two types: Type I is a rather fixed framework, whereas type II has a rather flexible character. In the present thesis, these four dimensions created by Marks and Hooghes were extended, for example, by a specification of horizontal, vertical and intermediary membership and the addition of the non-governmental level apart from the different political levels. The semi-type of multi-level governance was identified during the analysis of this dissertation. It combines the rather fixed background with a flexible application and thus unites types I and II.

Concerning the component of **greening NAFTA**, the context of the dissertation defines a **key declaration** based on expert comments and extends it via approaches to environmental assessment. The greening of NAFTA can be attained by mitigating the negative environmental impacts caused by the trade agreement and increasing the positive ones. These impacts need to be identified and monitored through scientific assessment (Chapter 2).

The Analytic Framework for Assessing the Environmental Effects of NAFTA (herein referred to as the Analytic Framework) developed by the CEC serves as independent variable in the dissertation. The Analytic Framework is the methodology used to support a scientific approach to identifying and monitoring the environmental impacts of NAFTA – the so-called environmental assessment of NAFTA (NAFTA EA). The CEC commissions studies that

continuously identify the environmental impacts of NAFTA based on the Analytic Framework. Here, the Framework can be used to identify changes in the environmental impacts due to specific activities developed in the scope of this dissertation. At this point, the analyses of the NAAEC and of the types of environmental assessment intersect.

Due to the scarcity of relevant literature, the dissertation was mainly based on general literature, CEC documents and expert interviews as well as on research stays and visits to the NAFTA countries and with the CEC (see Chapter 1).

First, the NAAEC is analysed with regard to multi-level governance and its effects on greening NAFTA (Chapter 6). The NAAEC creates a rather fixed framework for environmental cooperation, which is flexibly applied by the CEC through the working program, tasks and projects with an individual design and scope. The central governance levels of the NAAEC – the CEC, the nation states, the subnational level and the public representatives – demonstrate different levels of intersection, for example, unilaterally from the nation states to the CEC and unilaterally and in an advisory capacity from the Joint Public Advisory Committee to the CEC. The number of levels, however, can be interpreted differently according to whether participation is mandatory or voluntary in nature and additional extension. The non-governmental level may contribute through comments, whereas the regional level is not involved at all. Thus, in sum, the NAAEC relates to the semi-type: Though the NAAEC itself is mainly attached to type I, its practical implementation – mainly through the CEC – is usually related to type II.

Concerning their influence on greening NAFTA, the CEC's and the NAAEC's powers are rather limited. The NAAEC mainly aims to encourage trilateral environmental cooperation in general; trade, especially NAFTA, plays an inferior role in the agreement. Environment and trade matters are addressed in one of the five sections of the CEC working program ("Environment, Trade and Sustainability"). The work chiefly focuses on providing information on NAFTA's sensitive spots and partly on promoting voluntary initiatives. The development of the Analytic Framework is one of the CEC's tasks and is meant to identify NAFTA's environmental impacts. It thus fulfills the first requirement for greening NAFTA. This analysis is based on NAAEC Article 10.6, which requires an ongoing evaluation of NAFTA's environmental impacts and the creation of the new instrument of NAFTA EA. However, neither the tasks of the environment and trade section nor the results of the NAFTA EA are directly geared toward reducing NAFTA's negative environmental impacts and increasing the positive ones. Thus the incomplete relationship between NAFTA and NAAEC becomes obvious: Though the NAAEC itself and the CEC's working program refer to environment and trade links, the political influence of the NAAEC and the CEC on the greening of NAFTA is nearly non-existent.

Second, these various governmental levels with their individual scopes and the weak connection between **NAAEC** and greening NAFTA are also reflected in the approaches to **environmental assessment** that are part of the NAAEC (Chapter 7). The environmental agreement includes the instrument three times, each with an individual relation to multi-level governance and greening trade.

(1) In Article 2.1(e), part of the General Commitments, the nation states commit themselves to

assessing environmental impacts on their domestic territory. This commitment is interpreted in this dissertation as a pledge to support national legislation on project environmental impact assessment (project EIA) and the strategic environmental assessment for policies, plans and programs (SEA). Both types of the instrument are conducted ex-ante by domestic governmental authorities and analyze the environmental impacts of the respective activity. These two approaches thus allow or require that the activity be adapted according to the results of the evaluation prior to the realization of the activity. Despite the common elements in both instruments, the three nation states have individual backgrounds and implementation strategies for the instruments.

(2) In the Council Functions in Article 10.7, the NAAEC focuses on the transboundary EIA of projects, thereby attempting to add a transborder component to the existing domestic ex-ante procedures of project EIA without interfering with the existing domestic legislation. The idea is to include other countries that might be affected by the proposed activity, thereby providing opportunities for notification, information, participation and consultation.

The article requires the CEC to develop recommendations on the topic and the nation states, then to sign a binding agreement on transboundary EIA. Once this accord is ratified, the transboundary EIA will be a mandatory part of the domestic ex-ante EIA procedure. Although the CEC developed the recommendations in accordance with NAAEC requirements, the agreement on transboundary EIA is still pending. Activities, however, have recently been shifted to the Security and Prosperity Partnership and out of the jurisdiction of the CEC.

(3) Article 10.6 of the NAAEC, also part of the Council Functions, calls for the ongoing environmental assessment of NAFTA itself (NAFTA EA). The CEC developed the Analytic Framework as a scientific basis for these assessments. The evaluation itself is conducted under the auspices of the CEC but commissioned to scientists, associations and NGOs as public representatives. The NAFTA EA is an ex-post assessment that mainly monitors the results of the trade agreement, and devotes less effort to adapting the accords to the results. The studies are presented in public symposia.

In sum, the three types of environmental assessment interact differently with multi-level governance and with greening NAFTA. The key levels are the nation states with their responsibility for conducting project EIA, SEA and the application of the eventual transboundary EIA, and the CEC with its international advisory role for transboundary EIA and the NAFTA EA. The non-governmental level may contribute commentary, whereas the regional level is not involved at all. The four items of multi-level governance cannot be easily related to the types of environmental assessment; partly the fixed type I, partly II and partly the semi-type govern the process.

Concerning their contribution to greening NAFTA, neither domestic nor transboundary EIA are related to the trade agreement. The NAFTA EA, the assessment type closest to NAFTA, analyzes the impacts of the agreement but does not require its adaptation based on the results of the studies. However, the analysis of two case studies on “The Forestry Industry in the [Mexican] State of Chihuahua” (Guerrero et al. 2000) and “NAFTA Transportation Corridors” (Sierra Club et al. 2000) identifies the interaction between NAFTA and all three types of assessment (Chapter 8). In addition, the studies of the NAFTA EA clearly identified negative environmental impacts



of NAFTA, which require a greening of the accord.

As the hypothesis of the dissertation proved to be false – environmental assessment as part of NAFTA does *not* contribute to greening the trade accord – the central question then is: How can environmental assessment do so? To answer this question, the concept of NAFTA'S GREEN IMPACT was designed, introducing an analytic, adaptation and monitoring cycle that links the various types of environmental assessment and is based on multi-level governance (Chapter 8).

**NAFTA'S GREEN IMPACT** is based on the fact that environmental assessment and trade liberalization under NAFTA are closely linked. The liberalization process increases domestic activities involving trade, which impact specific sectors and regions. NAFTA'S GREEN IMPACT demands that the project EIA and the SEA in a domestic and transboundary context focus on their NAFTA-related impacts in their ex-ante analysis. Here, ex-ante project EIA and SEA in a domestic and transboundary context are linked with the ex-post NAFTA EA, forming a three-step analytic, adaptation and monitoring cycle with a total of five tasks. This cycle clearly links the project, policy, plan or program and the trade agreement. It also identifies and adapts environmental effects caused by NAFTA, as the concept links the different types of environmental assessment that are currently treated as separate and as detached from NAFTA as possible.

Step I Summary of the results of the NAFTA EA studies: The existing results and recommendations of the studies of the NAFTA EA are summarized according to the different sectors and regions (step I(a)+(b)). Furthermore, North American and sectoral maps illustrate the regional and sectoral foci of the studies. These maps and summaries identify environmental hotspots caused by NAFTA and develop further recommendations for specific regions and sectors and their relation to NAFTA. This information would allow an enhanced analysis of these regions and the sectors. The second step involves a mitigation of negative and an increase of the positive effects (either with or without a relation to environmental assessment).

Step II Extension of the environmental assessment procedure: Continuing the analytic, adaptation and monitoring cycle, the studies of domestic and transboundary EIA and SEA that are conducted in the years to come can then be linked to NAFTA. They can include a separate NAFTA section that provides information for the ongoing NAFTA EA and can – even apart from the trade section – interact with the results of step I in two tasks.

Step II(a) Analysis of NAFTA relevance and interaction: Ex-ante studies of newly proposed projects can refer to the results of these summaries and maps in their analysis. Thus the countries can easily pay special attention to projects proposed in NAFTA's environmental hotspot areas or sectors. Applying the recommendations from the summaries of step I and relating the environmental impacts to the proposed projects in these hotspots helps mitigating the environmental impact of the proposed activity in general. This step II(a) may be executed by all studies even outside a specific NAFTA context, a fact that improves environmental conditions even apart from NAFTA. Besides, studies with a direct/ indirect link to NAFTA can be extended on a voluntary basis to include a NAFTA focus, thus providing new reference data that fills the gaps of the NAFTA EA.

Step II(b) Trilateral public, governmental and expert participation: The proponents of the project, policy, plan or program can also extend the EIA and SEA voluntarily, through additional

trinal public participation and governmental, expert and CEC consultation. Public and governmental participation during the EIA and SEA, currently mainly local, can be opened with regard to the NAFTA impacts to all North American citizens, governmental institutions, NAFTA EA experts (authors who conducted the studies) and CEC staff, especially staff from the environment-trade section. This extension in terms of participation and consultation facilitates the identification of environmental impacts and creates appropriate mitigation and increase measures by incorporating the experiences of other regions. This step could be applied chiefly to NAFTA-related activities. Here again, this step may also provide additional reference data for future NAFTA EAs.

Step III Monitoring: The results provided in the extended analysis of the EIA and SEA are then again monitored in the ongoing NAFTA EA. The results of the monitoring then feed back into the maps and summaries and re-shape step I. At this point, the NAFTA-related activities in particular provide the information relevant to closing the analytic, adaptation and monitoring cycle. Once again, the CEC is the leading level, as it conducts the NAFTA EAs.

The **governance levels** have individual tasks that are often closely related to their scope as defined by the NAAEC. NAFTA'S GREEN IMPACT mainly works with leading levels that are supported by further governance levels. The CEC holds the lead in step I and III, but there is a common lead in step II. The Commission mainly provides a reference framework for these tasks, for example, through the development of maps and summaries and monitoring procedures. These tasks can only be fulfilled with the support of the domestic level, which may promote and facilitate the extended version of the domestic EIA and SEA directly to the proponent. Though not explicitly included in the NAAEC, the regional level also plays a vital role, as it focuses on specific regional topics, for example, on particular environmental media or sectoral development within the context of the studies. The regional level should contribute to the consultations of the studies as well as to the development of the regional and sectoral maps and summaries, because they are often clearly related to the regional level. Furthermore, the non-governmental level may comment on the technical work of the CEC related to the concept as well as on the environmental assessments themselves on the domestic level, and thus can be regarded as a critical voice in the concept.

**Challenges** to NAFTA'S GREEN IMPACT can be attributed mainly to the voluntary nature of the concept, as proponents may not apply the concept if it is not obligatory. The extended version of environmental assessment may increase bureaucracy and the processing time of the studies, thus entailing extra costs and effort. The efficacy of the information-gathering in step II may also be jeopardized if only a limited number of proponents actually agree to apply the concept. The proponents must therefore be compensated for the extra effort they devote to NAFTA'S GREEN IMPACT, either through specific labelling or public acknowledgement via the CEC. The role of the regional level as a rather informal aggregate is not very well developed so far in terms of environmental assessment, a fact that may limit its interest and influence in participating in the concept.

Concerning the role of the CEC, any of its tasks regarding this concept need to be approved by the Council, a fact that may limit the application of the concept in pilot projects. Concerning the additional level, the public may not pay attention to CEC activities, as general interest in the work of the Commission has decreased somewhat in recent years.

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It is also possible to **transfer** the concept of NAFTA'S GREEN IMPACT to trade agreements outside of North America, in order to test its validity beyond the NAFTA area. However, as only a few trade-related environmental assessments exist, the interaction of trade and project EIA and SEA for policies, plans and programs cannot be taken for granted (rationale for greening), there is no information to create reference maps and summaries (step I) and the results of the studies (step II) are also not monitored (step III). In addition, as NAAEC and the creation of new institutions such as the CEC, the Governmental Advisory Committee and the Joint Public Advisory Committee are usually absent in other trade agreements, multi-level governance cannot form the basis for the concept.

In conclusion, two central elements are missing for a successful and effective transfer of the concept of NAFTA'S GREEN IMPACT: (1) an ongoing environmental assessment of the trade agreement and (2) the CEC as superior guiding institution. The analysis of the transfer thus accentuates once again the vital influence that the the Commission for Environmental Cooperation and the ongoing NAFTA EA have on the greening of the trade agreement in NAFTA'S GREEN IMPACT.



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## 11.2 Expert Interviews

<b>Name</b>	<b>Gustavo Alanis Ortega</b>
<b>Position</b>	Presidente
<b>Institution</b>	Centro Mexicano de Derecho Ambiental, A.C.
<b>Date of the Interview</b>	November 29 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Names</b>	<b>Dr. Miriam Alfie Cohen</b>
<b>Position</b>	Directora
<b>Institution</b>	Departamento de Sociología-U. Azcapotzalco Universidad Autónoma Metropolitana
<b>Date of the Interview</b>	November 2 <sup>nd</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Names and Positions</b>	<b>Temis Alvarez</b> (Project Manager) <b>Arkelaio Lopez</b> (Deputy Operations Director)
<b>Institution</b>	Border Environmental Cooperation Commission
<b>Date of the Interview</b>	November 13 <sup>th</sup> , 2006 (joint meeting)
<b>Place of the Interview</b>	Ciudad Juárez, Mexico
<b>Name</b>	<b>Rosa Linda Amezcua Hernández</b>
<b>Position</b>	Subdirectora de Vinculación Sectorial
<b>Institution</b>	Secretaría de Medio Ambiente y Recursos Naturales
<b>Date of the Interview</b>	October 19 <sup>th</sup> , 2006, October 30 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, México
<b>Name</b>	<b>Edit Antal Fodroczy</b>
<b>Position</b>	Investigadora y Coordinadora
<b>Institution</b>	Centro de Investigaciones sobre América del Norte
<b>Date of the Interview</b>	October 5 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>David Aspinwall</b>
<b>Position</b>	Directorate General Environment/ national expert
<b>Institution</b>	European Commission
<b>Date of Interview</b>	July 31 <sup>st</sup> , 2006
<b>Place of Interview</b>	Telephone interview
<b>Name</b>	<b>Gerald Aubry</b>
<b>Position</b>	Senior Policy Advisor
<b>Institution</b>	Canadian Environmental Assessment Agency
<b>Date of the Interview</b>	April 5 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Ottawa, Canada
<b>Name</b>	<b>Dr. Suzelle Barrington</b>
<b>Position</b>	Researcher Department of Bioresource Engineering
<b>Institution</b>	McGill University
<b>Date of the Interview</b>	April 11 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada

<b>Name</b>	<b>Arturo Barrio González</b>
<b>Position</b>	Director de Asuntos Fronterizos de América del Norte
<b>Institution</b>	Secretaría de Relaciones Exteriores
<b>Date of the Interview</b>	October 24 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Names, Positions, Institutions</b>	<b>Daniel Borunda</b> Environmental Protection Specialist United States Section, International Boundary and Water Commission (USIBWC) <b>Sally Spener</b> Public Affairs Specialist United States Section, International Boundary and Water Commission (USIBWC) <b>Gilbert Tellez, Ph.D.</b> Project Manager Environmental Protection Agency, Region 6 (US EPA) November 15 <sup>th</sup> , 2006 (joint meeting) El Paso, USA
<b>Date of the Interview</b>	
<b>Place of the Interview</b>	
<b>Name</b>	<b>Dr. Bernhard Bösl</b>
<b>Position</b>	Director
<b>Institution</b>	Gesellschaft für Technische Zusammenarbeit, Office Mexico
<b>Date of the Interview</b>	December 6 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Thomas Bunge, Prof. Dr.</b>
<b>Position</b>	Director Environmental Assessment
<b>Institution</b>	Umweltbundesamt
<b>Date of the Interview</b>	May 18 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Dessau, Germany
<b>Name</b>	<b>Laura Carlsen</b>
<b>Position</b>	Director of the Americas Program
<b>Institution</b>	International Relations Center
<b>Date of the Interview</b>	November 30 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Chantal Line Carpentier, Ph.D.</b>
<b>Position</b>	Head of the Environment, Economy and Trade Program
<b>Institution</b>	Commission for Environmental Cooperation
<b>Date of the Interview</b>	May 9 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Name</b>	<b>Gabriela Carranza Ortiz</b>
<b>Position</b>	Jefa del Departamento de Impacto Ambiental del Programa Universitario del Medio Ambiente
<b>Institution</b>	Universidad Nacional Autónoma de México
<b>Date of the Interview</b>	October 12 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico

<b>Name</b>	<b>Silvia Virginia Castro Arreola</b>
<b>Position</b>	Directora
<b>Institution</b>	Secretaría de Desarrollo Urbano y Ecología, Dirección Ecología Estado de Chihuahua
<b>Date of the Interview</b>	Novembre 16 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Cuidad Juárez, Mexico
<b>Name</b>	<b>Juan Manuel Emilio Cedrun Vázquez</b>
<b>Position</b>	Director General Adjunto de Asuntos Fronterizos Coordinador del Programa Frontera 2012 Miembro del Board of Directors de la COCEF y del BDAN
<b>Institution</b>	Secretaría de Medio Ambiente y Recursos Naturales, Comisión de Asuntos Internacionales
<b>Date of the Interview</b>	October 23 <sup>th</sup> , 2006, October 30 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, México
<b>Name</b>	<b>Petro Cital</b>
<b>Position</b>	Subdirector Técnico
<b>Institution</b>	Instituto Municipal de Investigación y Planeación Ciudad Juárez
<b>Date of the Interview</b>	November 15 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Ciudad Juárez, México
<b>Name</b>	<b>Archie Clouse</b>
<b>Position</b>	Regional Director, Region 6, El Paso
<b>Institution</b>	Texas Commission on Environmental Quality
<b>Date of the Interview</b>	November 14 <sup>th</sup> , 2006
<b>Place of the Interview</b>	El Paso, USA
<b>Name</b>	<b>Robert Connelly</b>
<b>Position</b>	Former President Canadian Environment Assessment Agency
<b>Institution</b>	---
<b>Date of the Interview</b>	April 4 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Ottawa, Canada
<b>Name</b>	<b>Ana María Contreras Vigil</b>
<b>Position</b>	Directora General de Gestión de la Calidad del Aire, Registro de Emisiones y Transferencia de Contaminantes
<b>Institution</b>	Secretaría de Medio Ambiente y Recursos Naturales
<b>Date of the Interview</b>	October 20 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Dr. Mark Curtis</b>
<b>Position, Institution</b>	Associate Professor McGill University Director McGill-UNEP Collaborating Centre on Environmental Assessment
<b>Date of the Interview</b>	May 22 <sup>nd</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Name</b>	<b>Jaye Ellis, Ph.D.</b>
<b>Position</b>	Professor, Faculty of Law
<b>Institution</b>	McGill School of Law
<b>Date of the Interview</b>	April 13 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada

<b>Name</b>	<b>Leilani Aisha Escamilla González</b>
<b>Position</b>	Officer
<b>Institution</b>	Secretaría de Economía, Subsecretaría de Negociaciones Comerciales Internacionales
<b>Date of the Interview</b>	October 9 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Daniel Evans, Ph.D.</b>
<b>Position</b>	Team leader Environment and Economic Growth
<b>Institution</b>	United States Agency of International Development
<b>Date of the Interview</b>	December 4 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Dr. Adrian Fernandez Bremauntz</b>
<b>Position</b>	Presidente
<b>Institution</b>	Instituto Nacional de Ecología
<b>Date of the Interview</b>	October 9 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico D.F., Mexico
<b>Name</b>	<b>Tara Frezza</b>
<b>Position</b>	Policy Advisor
<b>Institution</b>	Environmental Assessment Division Environment Canada
<b>Date of the Interview</b>	May 3 <sup>rd</sup> , 2007
<b>Place of the Interview</b>	Ottawa, Canada
<b>Name</b>	<b>Geoffrey Garver</b>
<b>Position</b>	Director, Submissions on Enforcement Matters Unit
<b>Institution</b>	Commission for Environmental Cooperation
<b>Date of the Interview</b>	April 18 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Name</b>	<b>Dr. Markus W. Gehring</b>
<b>Position, Institution</b>	Lecturer in International Law, Centre of International Studies, Center for International Studies, University of Cambridge Lead Counsel, Trade, Investment, Competition Law, Center for International Sustainable Development Law
<b>Date of the Interview</b>	April 2 <sup>nd</sup> , 2007
<b>Place of the Interview</b>	Ottawa, Canada
<b>Name</b>	<b>Maria Elena Giner</b>
<b>Position</b>	Director of Operations
<b>Institution</b>	Border Environment Cooperation Commission
<b>Date of the Interview</b>	November 15 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Ciudad Juárez, Mexico
<b>Name</b>	<b>Juan Godínez Zuñiga</b>
<b>Position</b>	Subdirector de Crédito Externo
<b>Institution</b>	Secretaría de Medio Ambiente y Recursos Naturales- Créditos Externos
<b>Date of the Interview</b>	October 20 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico

<b>Name</b>	<b>Bernice Goldsmith, Prof.</b>
<b>Position</b>	Professor Social Aspects of Engineering
<b>Institution</b>	Concordia University
<b>Date of the Interview</b>	May 16 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Name</b>	<b>Luis Guadarrama Marrón</b>
<b>Position</b>	Coordinador Programa sobre Comercio y Medio Ambiente
<b>Institution</b>	Centro Mexicano de Derecho Ambiental, A.C.
<b>Date of the Interview</b>	October 27 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Hernando Guerrero Cazares</b>
<b>Position</b>	Director de la oficina de enlace en México
<b>Institution</b>	Comisión para la Cooperación Ambiental
<b>Date of the Interview</b>	October 26 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, México
<b>Name</b>	<b>Elizabeth Gutiérrez Romero</b>
<b>Position</b>	Investigadora Centro de Investigaciones sobre América del Norte
<b>Institution</b>	Centro de Investigaciones sobre América del Norte, Universidad Nacional Autónoma de México
<b>Date of the Interview</b>	November 30 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, México
<b>Name</b>	<b>Dr. Ricardo Hernandez Murillo</b>
<b>Position</b>	Especialista Ambiental Senior
<b>Institution</b>	Banco Mundial
<b>Date of the Interview</b>	November 30 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, México
<b>Name</b>	<b>Dr. Klaus Horstmann</b>
<b>Position</b>	Stabsstelle Nachhaltigkeit
<b>Institution</b>	KfW Entwicklungsbank
<b>Date of the Interview</b>	May 16 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Telephone interview
<b>Name</b>	<b>Ricardo Juárez Palacios</b>
<b>Position</b>	Director General
<b>Institution</b>	Secretaría de Medio Ambiente y Recursos Naturales, Dirección General del Impacto y Riesgo Ambiental
<b>Date of the Interview</b>	October 31 <sup>st</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>William Kennedy, Ph.D.</b>
<b>Position</b>	Former Executive Director
<b>Institution</b>	---
<b>Date of the Interview</b>	April 12 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada

<b>Name</b>	<b>Martha Kostuch</b>
<b>Position</b>	Vice-President
<b>Institution</b>	Friends of the Oldman River Society
<b>Date of the Interview</b>	May 23 <sup>rd</sup> , 2007
<b>Place of the Interview</b>	Telephone interview
<b>Name</b>	<b>Jochen Krimphoff</b>
<b>Position</b>	Lead in the elaboration of the Trade SIA of the EU ACP partnership
<b>Institution</b>	PricewaterhouseCooper
<b>Date of the Interview</b>	September 27 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Telephone interview
<b>Name</b>	<b>Alejandro Lorea Hernández</b>
<b>Position</b>	Director General
<b>Institution</b>	Comisión de Estudios del Sector Privado para el Desarrollo Sustentable
<b>Date of the Interview</b>	November 4 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Jesús Luévano Grano</b>
<b>Position</b>	Director General
<b>Institution</b>	Comisión de Estudios del Sector Privado para el Desarrollo Sustentable
<b>Date of the Interview</b>	November 14 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Ciudad Juárez, Mexico
<b>Name</b>	<b>Howard Mann, Ph.D.</b>
<b>Position</b>	Associate, Senior International Law Advisor
<b>Institution</b>	International Institute for Sustainable Development
<b>Date of the Interview</b>	May 2 <sup>nd</sup> , 2007
<b>Place of the Interview</b>	Ottawa, Canada
<b>Name</b>	<b>Karel Mayrand</b>
<b>Position</b>	Director Research and Consulting
<b>Institution</b>	Unisfera
<b>Date of the Interview</b>	May 17 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Names and Positions</b>	<b>Rachel McCormick, Ph.D.</b> Senior Policy Advisor Sustainable Development Division <b>Jaye Shuttleworth</b> Former Director of the Environment and Energy Division Sustainable Development Division
<b>Institution</b>	Department of Foreign Affairs and International Trade Canada
<b>Date of the Interview</b>	April 4 <sup>th</sup> , 2007 (joint meeting)
<b>Place of the Interview</b>	Ottawa, Canada
<b>Name</b>	<b>Manuel Medina Aguilar</b>
<b>Position</b>	Director General Adjunto de Cooperación Internacional
<b>Institution</b>	Secretaría de Medio Ambiente y Recursos Naturales, Comisión de Asuntos Internacionales
<b>Date of the Interview</b>	October 6 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico

<b>Name</b>	<b>Dr. Alejandro Mercado Celis</b>
<b>Position</b>	Investigador
<b>Institution</b>	Universidad Nacional Autónoma de México, Centro de Investigaciones sobre América del Norte
<b>Date of the Interview</b>	October 12 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Dr. Carlos Muñoz Piña</b>
<b>Position</b>	General Director
<b>Institution</b>	National Environmental Institute Directorate General for Investigation of Environmental Policy and Economics
<b>Date of the Interview</b>	October 12 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Dr. Norma Patricia Muñoz Sevilla</b>
<b>Position</b>	Profesora Investigadora
<b>Institution</b>	Intstituto Politecnico Nacional
<b>Date of the Interview</b>	December 13 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Nadine Nickner</b>
<b>Position</b>	A/Senior Economist
<b>Institution</b>	Environment Canada
<b>Date of the Interview</b>	May 3 <sup>rd</sup> , 2007
<b>Place of the Interview</b>	Ottawa, Canada
<b>Name</b>	<b>Katia Opalka</b>
<b>Position</b>	Legal Officer, Submissions on Enforcement Matters Unit
<b>Institution</b>	Commision for Environmental Cooperation
<b>Date of the Interview</b>	May 23 <sup>rd</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Name</b>	<b>Marc Paquin</b>
<b>Position</b>	Executive Director Unisfera Former staff member of the CEC Secretariat (1995-2000)
<b>Institution</b>	Unisfera
<b>Date of the Interview</b>	May 17 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Names</b>	<b>Dr. Stefanie Pfahl</b>
<b>Position</b>	(Trade expert)
<b>Institution</b>	(Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit)
<b>Date of the Interview</b>	June 2 <sup>nd</sup> , 2006
<b>Place of the Interview</b>	Berlin, Germany
<b>Name</b>	<b>Martín J. de la C. Quijano Poumian</b>
<b>Position</b>	Director de Evaluación Sectores Energía e Industria
<b>Institution</b>	Secretaría de Medio Ambiente y Recursos Naturales, Dirección General del Impacto y Riesgo Ambiental
<b>Date of the Interview</b>	October 31 <sup>st</sup> , 2006
<b>Place of Interview</b>	Mexico City, Mexico



<b>Name</b>	<b>Cody Rice</b>
<b>Position</b>	Program Manager, Environmental Information
<b>Institution</b>	Commission for Environmental Cooperation (CEC)
<b>Date of the Interview</b>	April 27 <sup>th</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Name</b>	<b>Carlos A. Rincon, Ph.D.</b>
<b>Position</b>	U.S. EPA Region 6 Border Office Director
	Former employee of Environmental Defense Fund
<b>Institution</b>	Environmental Protection Agency (EPA)
<b>Date of the Interview</b>	November 19 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Telephone interview
<b>Nombre</b>	<b>Rolando C. Ríos Aguilar</b>
<b>Position</b>	Asesor del Presidente del Instituto
<b>Institution</b>	Instituto Nacional de Ecología (INE)
<b>Date of the Interview</b>	October 23 <sup>rd</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Venustiano Rosales Morales</b>
<b>Position</b>	Director Comité Ambiental
<b>Institution</b>	Representante de las Maquiladoras
<b>Date of the Interview</b>	November 16 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Ciudad Juárez, Chihuahua, Mexico
<b>Name</b>	<b>Carlos Sandoval Olvera</b>
<b>Position/ Institution</b>	Presidente, Consejo Nacional de Industriales Ecologistas
	Joint Public Advisory Committee, Member for Mexico
<b>Date of the Interview</b>	November 16 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Matthias Sauer</b>
<b>Position</b>	Officer, Focal point Espoo Convention
<b>Institution</b>	Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit
<b>Datum des Interviews</b>	August 5 <sup>th</sup> , 2006
<b>Ort des Interviews</b>	Berlin, Deutschland
<b>Name</b>	<b>Claudia Schatan</b>
<b>Position</b>	Jefa de la Unidad de Desarrollo Industrial
<b>Institution</b>	Comisión Económica para América Latina y el Caribe de las Naciones Unidas
<b>Date of the Interview</b>	December 8 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Tim Smith</b>
<b>Position</b>	Senior Policy Advisor
<b>Name</b>	<b>Candace Anderson</b>
<b>Position</b>	Policy Advisor
<b>Institution</b>	Canadian Environmental Assessment Agency (CEAA)
<b>Date of the Interview</b>	April 3 <sup>rd</sup> , 2007 (joint meeting)
<b>Place of the Interview</b>	Ottawa, Canada

<b>Name</b>	<b>Paulo Solano</b>
<b>Position</b>	Legal Officer, Submissions on Enforcement Matters Unit
<b>Institution</b>	Commission for Environmental Cooperation
<b>Date of the Interview</b>	May 23 <sup>rd</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada
<b>Name</b>	<b>Erik Sparling</b>
<b>Position</b>	Policy Advisor
<b>Institution</b>	National Round Table on the Environment and the Economy
<b>Date of the Interview</b>	May 3 <sup>rd</sup> , 2007
<b>Place of the Interview</b>	Ottawa, Canada
<b>Name</b>	<b>Verena Vahland</b>
<b>Position</b>	Assistant Policy Officer
<b>Institution</b>	European Commission, Directorate General for Trade
<b>Date of the Interview</b>	September/ October 2007
<b>Place of the Interview</b>	Various emails
<b>Name</b>	<b>Grethel Villacaña Yepez</b>
<b>Position</b>	Officer
<b>Institution</b>	Secretaría de Medio Ambiente y Recursos Naturales, Dirección General del Impacto y Riesgo Ambiental
<b>Date of the Interview</b>	October 26 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Alejandro Villamar</b>
<b>Position</b>	Investigación Ambiental
<b>Institution</b>	Red Mexicana de Acción Frente al Libre Comercio
<b>Date of the Interview</b>	October 26 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Jorge Villareal</b>
<b>Position</b>	Asesor
<b>Institution</b>	Fundación Heinrich Böll México
<b>Date of the Interview</b>	December 12 <sup>th</sup> , 2006
<b>Place of the Interview</b>	Mexico City, Mexico
<b>Name</b>	<b>Timothy Whitehouse</b>
<b>Position</b>	Program Manager
<b>Institution</b>	Commission for Environmental Cooperation
<b>Date of the Interview</b>	May 23 <sup>rd</sup> , 2007
<b>Place of the Interview</b>	Montréal, Canada

## **Annex**

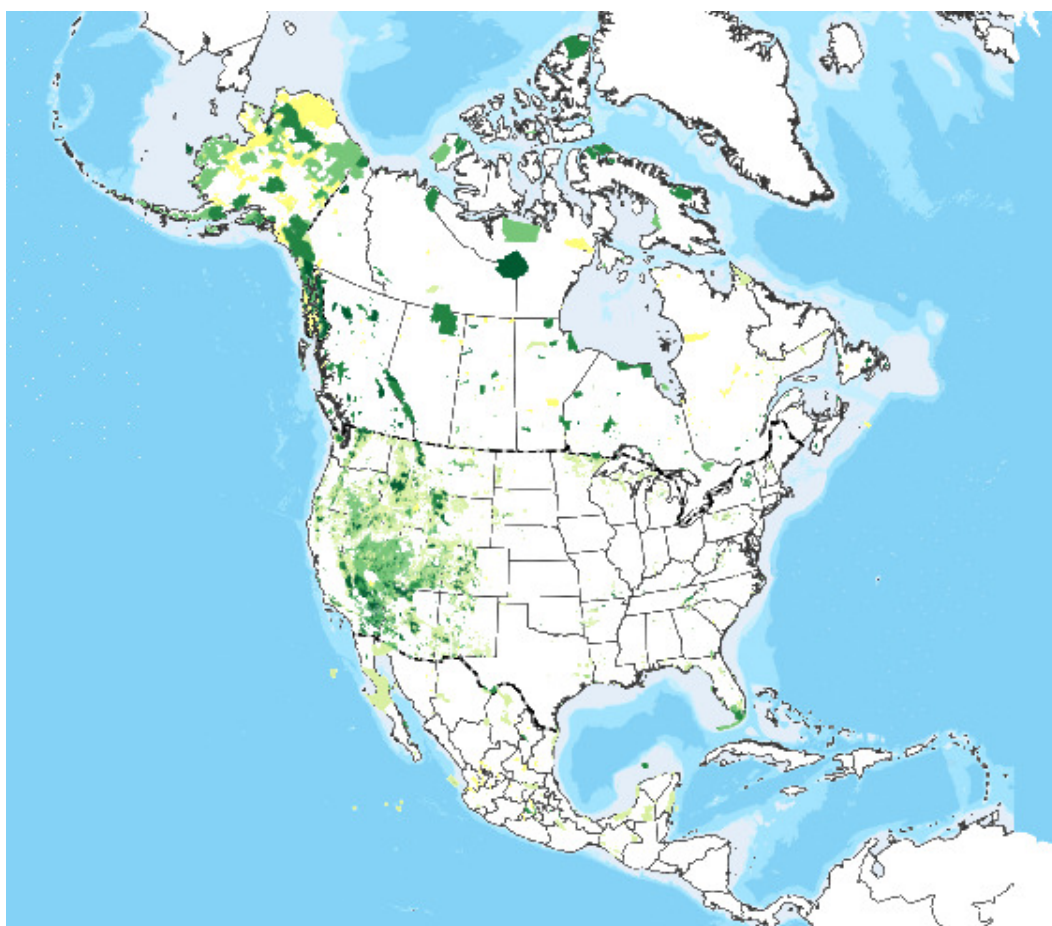


## Annex I: Selected Maps of the CEC Atlas of the North American Hemisphere

**Protection of species and areas:** layer of Terrestrial Protected Areas









(in addition to the layers Bathymetry, Political Boundaries)

(CEC, no date: North American Environmental Atlas + link to the respective layers).



### Legend

IUCN categories:

	Ia
	Ib
	II
	III
	IV
	V
	VI
	Unknown

**Protection of species and areas:** layer of Species of Common Conservation Concern  
layers of Humpback Whale, Monarch Butterfly  
(in addition to the layers Bathymetry, Political Boundaries)  
(CEC, no date: North American Environmental Atlas + link to the respective layers).



### Legend

- Humpback Whale
- Monarch Butterfly

**Pollution and waste:** layer of Marine Vessel Emissions

(in addition to the layers Bathymetry, Political Boundaries)

(CEC, no date: North American Environmental Atlas + link to the respective layer).

**Legend**

: Emissions (kg/16km<sup>2</sup>):

- 1 - 100
- 100 - 500
- 500 - 1,000
- 1,000 - 200,000



**Pollution and waste:** layer of

Industrial Pollutants

(in addition to the layers Bathymetry, Political Boundaries)

(CEC, no date: North American Environmental Atlas + link to the respective layer).

**Legend**

- Canada: National Pollutant Release Inventory (NPRI)
- USA: Toxic Release Inventory (TRI)
- Mexico: Registro de Emisiones y Transferencia de Contaminantes (RETC)



## **Annex II: General Index of NAFTA and NAAEC**

### **North American Free Trade Agreement 1994 (NAFTA)**

Preamble

- Chapter 1      Objectives
- Chapter 2      General Definitions
- Chapter 3      National Treatment and Market Access for Goods
- Annex 300-A: Trade and Investment in the Automotive Sector
- Annex 300-B: Textile and Apparel Goods
- Chapter 4      Rules of Origin
- Chapter 5      Customs Procedures
- Chapter 6      Energy and Basic Petrochemicals
- Chapter 7      Agriculture and Sanitary and Phytosanitary Measures
- Chapter 8      Emergency Action
- Chapter 9      Standards-Related Measures
- Chapter 10     Government Procurement
- Chapter 11     Investment
- Chapter 12     Cross-Border Trade in Services
- Chapter 13     Telecommunications
- Chapter 14     Financial Services
- Chapter 15     Competition Policy, Monopolies and State Enterprises
- Chapter 16     Temporary Entry for Business Persons
- Chapter 17     Intellectual Property
- Chapter 18     Publication, Notification and Administration of Laws
- Chapter 19     Review and Dispute Settlement in Antidumping and Countervailing  
Duty Matters
- Chapter 20     Institutional Arrangements and Dispute Settlement Procedures
- Chapter 21     Exceptions
- Chapter 22     Final Provisions

### **NOTES**

Annex 401: Specific Rules of Origin

### **NAFTA Annexes**

- Annex I        Reservations for Existing Measures and Liberalization Commitments
- Annex II       Reservations for Future Measures
- Annex III      Activities Reserved to the State
- Annex IV      Exceptions from Most-Favored-Nation Treatment
- Annex V       Quantitative Restrictions
- Annex VI      Miscellaneous Commitments
- Annex VII     Reservations, Specific Commitments and Other Items

(NAFTA 1992, NAFTA Secretariat 2009: North American Free Trade Agreement)

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## North American Agreement on Environmental Cooperation 1993 (NAAEC)

### Preamble

### Part I: Objectives

#### Article 1 Objectives

### Part II: Obligations

#### Article 2 General Commitments

#### Article 3 Level of Protection

#### Article 4 Publication

#### Article 5 Government Enforcement Action

#### Article 6 Private Access to Remedies

#### Article 7 Procedural Guarantees

### Part III: Commission for Environmental Cooperation

#### Section A: The Commission

##### Article 8: The Commission

##### Article 9: Council Structure and Procedures

##### Article 10: Council Functions

#### Section B: The Secretariat

##### Article 11: Secretariat Structure and Procedures

##### Article 12: Annual Report of the Commission

##### Article 13: Secretariat Reports

##### Article 14: Submissions on Enforcement Matters

##### Article 15: Factual Record

#### Section C: Advisory Committees

##### Article 16: Joint Public Advisory Committee

##### Article 17: National Advisory Committees

##### Article 18: Governmental Committees

#### Section D: Official Languages

##### Article 19: Official Languages

### Part IV: Cooperation and Provision of Information

#### Article 20: Cooperation

#### Article 21: Provision of Information

### Part V: Consultation and Resolution of Disputes

#### Article 22: Consultations

#### Article 23: Initiation of Procedures

#### Article 24: Request for an Arbitral Panel

#### Article 25: Roster

#### Article 26: Qualifications of Panelists

#### Article 27: Panel Selection

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Article 28:	Rules of Procedure
Article 29:	Third Party Participation
Article 30:	Role of Experts
Article 31:	Initial Report
Article 32:	Final Report
Article 34:	Review of Implementation
Article 35:	Further Proceeding
Article 36:	Suspension of Benefits

#### Part VI: General Provisions

Article 37:	Enforcement Principle
Article 38:	Private Rights
Article 39:	Protection of Information
Article 40:	Relation to Other Environmental Agreements
Article 41:	Extent of Obligations
Article 42:	National Security
Article 43:	Funding of the Commission
Article 44:	Privileges and Immunities
Article 45:	Definitions

#### Part VII: Final Provisions

Article 46:	Annexes
Article 47:	Entry into Force
Article 48:	Amendments
Article 49:	Accession
Article 50:	Withdrawal
Article 51:	Authentic Texts

#### NAAEC Annexes

Annex 34	Monetary Enforcement Assessment
Annex 36A	Canadian Domestic Enforcement and Collection
Annex 36B	Suspension of Benefits
Annex 41	Extent of Obligations
Annex 45	Country-specific Definitions

(North American Agreement on Environmental Cooperation 1993, CEC, no date:  
North American Agreement on Environmental Cooperation)

## **Annex III: List of the NAFTA EA Studies presented at the CEC Symposia 2000, 2003, 2005 and 2008 and the Pilot Studies**

### **Pilot Studies (CEC 1999a)**

- Issue Study 1: Maize in Mexico: Some Environmental Implications of the North American Free Trade Agreement
- Issue Study 2: Feedlot Production of Cattle in the United States and Canada: Some Environmental Implications of the North American Free Trade Agreement
- Issue Study 3: Electricity in Canada, Mexico and the United States: Some Environmental Implications of the North American Free Trade Agreement

### **First North American Symposium on Understanding the Linkages between Trade and Environment (CEC 2000)**

- NAFTA Environmental Impacts on North American Fisheries  
*Chomo, G., Ferrantino, M. (US International Trade Commission)*
- Assessing the Environmental Effects of NAFTA on the Forestry Sector in Mexico  
*Texas Center for Policy Studies, Comisión de Solidaridad y Defensa a los Derechos Humanos*
- Assessing NAFTA Effects on Water  
*Sierra Club of Canada*
- NAFTA and Industrial Pollution  
*Reinert, K. (School of Public Policy, George Mason University), Roland-Holst, D. (Mills College)*
- The Impact of NAFTA on Mexico's Economy and Environment  
*Gutiérrez Moreno, F. (Instituto para la Protección Ambiental de Nuevo León)*
- The Generation and Management of Transboundary Hazardous Waste Shipments between Canada, Mexico and the United States  
*Canadian Institute for Environmental Law and Policy, Texas Center for Policy Studies and La Neta: Proyecto Emisiones Espacio Virtual*
- Assessing the Impact of NAFTA on Environmental Law and Management Processes  
*Mann, H. (International and Environmental Law and Policy)*
- Is There a Race to the Bottom in Environmental Policies?  
*Fredriksson, P., Milliment, D. (Southern Methodist University)*

- The Relocation of El Paso's Garment Stonewashing Industry  
*Abel, A. (National Wildlife Federation)*
- NAFTA Transportation Corridors: Approaches to Assessing Environmental Impacts and Alternatives  
*The Sierra Club and the Texas Citizens Fund, with technical support from WWF-US*
- Mexico's Manufacturing Exports and Environment under NAFTA  
*Schatan, C. (Economic Commission for Latin America and the Caribbean)*
- Methodologies for Evaluating the Environmental Effects of Services Trade Liberalization  
*Andrew, D. (Organization of Economic Cooperation and Development)*
- Will Free Trade in Electricity between Canada and the US Improve Environmental Quality  
*Plagiannakos, T. (Ontario Power Generation)*
- Relationship between Wastewater Treatment and NAFTA  
*Kornylak, V. (Arizona Center for Law and Public Interest)*

**Trade & Environment in the Americas 2003** (Second North American Symposium on Understanding the Linkages between Trade and Environment) (CEC 2003/ no date: Trade and Environment in the Americas)

- Open Trade with the US without Compromising Canada's Ability to Comply with its Kyoto Target  
*Zhang, Z. (East-West Center)*
- Energy Use in the Cement Industry in North America: Emissions, Waste Generation and Pollution Control, 1990-2001  
*Jacott, M. (Fronteras Comunes), Reed, C.B.H. (Texas Center for Policy Studies), Taylor, A., Winfield, M. (The Pembina Institute for Appropriate Development)*
- The Conflicting Economic and Environmental Logics of North American Governance: NAFTA, Energy Subsidies, and the Environment  
*Roff, R. J., Clarkson, S. (University of Toronto), Krajnc, A., (Sierra Club Canada)*
- Historical and Current Impacts of Trade on Indigenous Groups in North America  
*Corbett, J. (Portland State University)*
- Agricultural Trade Liberalization and the Environment in North America: Analyzing the 'Production Effect'  
*Porter, G. (Consultant) (Commissioned by the CEC Secretariat)*
- Some Domestic Environmental Effects of US Agricultural Adjustments under Liberalized Trade: A Preliminary Analysis  
*Cooper, J., Johansson, R., Peters, M. (Economic Research Service/USDA)*

- Aquifers and Agrochemicals in a Border Region: NAFTA Challenges and Opportunities for Mexican Agriculture  
*Martínez Rodríguez, J. M. (Red Fronteriza de Salud y Ambiente, A.C.)*
- The Socio-economic and Environmental Effects of the Trade Liberalization of Basic Grains within the Context of NAFTA: The Case of Sinaloa  
*de Ita, A. (Centro de Estudios para el Cambio en el Campo Mexicano, A.C.)*
- NAFTA and Conservation of Maize Diversity in Mexico  
*Dyer, G. A. (University of California), Yúnez-Naude, A. (Centro de Estudios Económicos, El Colegio de México)*
- The Economic and Environmental Impacts of Agricultural Subsidies: An Assessment of the 2002 US Farm Bill and Doha Round  
*Mayrand, K., Dionne, S., Paquin, M., Pageot-LeBel, I. (Unisfera International Centre)*
- Comparative Standards for Intensive Livestock Operations in Canada, Mexico, and the United States  
*Speir, J. (Tulane Institute for Environmental Law and Policy, Tulane Law School), Bowden, M.-A. (University of Saskatchewan), Ervin, D. (Winrock International), McElfish, J. (Environmental Law Institute); Pérez Espejo, R. (Universidad Nacional Autónoma de México); Whitehouse, T.; Carpentier, C. L. (Commission for Environmental Cooperation), (Commissioned by the CEC Secreteriat)*
- Local Environmental Protection and Trade: The Cases of Hog Production in Canada and Mexico  
*Cloutier, L. M (Dept of Management and Technology, Université du Québec à Montréal), Thomassin, P. J. (Department of Agricultural Economics, McGill University), Dagicour, F. (Research Centre in Private and Comparative Law, McGill University), Rodríguez, J.-C. (Dept of Management and Technology, Université du Québec à Montréal)*
- Invasive Species, Agriculture and Trade: Case Studies from the NAFTA Context  
*Perrault, A., Bennett, M. (Center for International Environmental Law), Burgiel, S., Delach, A., Muffett, C. (Defenders of Wildlife)*
- Americas Sustainability Issues: Biodiversity, Indigenous Knowledge and Intellectual Property Rights  
*Bastida Muñoz, M. C. (Mexican Council for Sustainable Development)*

**Trade & Environment in North America 05** (Third North American Symposium on Assessing the Environmental Effects of Trade) (CEC (no date): Third North American Symposium on Assessing the Environmental Effects of Trade)<sup>129</sup>

- Learning Processes in the Maquiladora Export Industry and Environmental

<sup>129</sup> The homepage of the Symposium 2005 does not name the institution of the authors.

Technologies in Three Northern Border Cities in Mexico: Tijuana, Mexicali, and Ciudad Juárez

*Barajas E., M., Rodríguez C., C., García, H.*

- Business Environmental Decisions in the Context of the Free Trade Agreement  
*Domínguez-Villalobos, L., Brown-Grossman, F.*
- Environmental Policy Implications of Investor-State Arbitration Under NAFTA Chapter 11  
*Gaines, S.*
- Trade Liberalization and the Porter Effect: Theory and (Preliminary) Evidence from Mexico  
*Gawande, K., Islas-Camargo, A.*
- The Effect of NAFTA on Energy and Environmental Efficiency in Mexico  
*Stern, D.*
- NAFTA and the Mexican Automobile Industry: the Road Towards Harmonization of Environmental Standards on a North American Basis  
*Studer, I.*
- Scale, Technique and Composition Effect in the Mexican Agricultural Sector: The Influence of NAFTA and the Institutional Environment  
*Vilas-Ghiso, S. J., Liverman, D. M.*
- The NAFTA environmental agreement: The Intersection of Trade and the Environment  
*Plant, J.*
- The Maquiladora Electronics Industry and the Environment along Mexico's Northern Border  
*Schaban, C., Castilleja, L.*
- "Push" and "Pull" Impacts of NAFTA on Environmental Responsiveness and Performance in Mexican Industry  
*Wisner, P., Epstein, M. J.*
- Opportunities and Barriers for Renewable Energy in NAFTA  
*Howse, R. L., van Bork, P.*

**Trade & Environment in North America 08** (Fourth Symposium) (CEC, no date: Trade & Environment in North America 08)

- Structural Changes in Mexico; Economic Growth, Trade Liberalization, NAFTA and the Environment  
*Alanís-Ortega, G. (Centro Mexicano de Derecho Ambiental)*
- Pollution and International Trade in Services  
*Levinson, A. (Economics Department, Georgetown University/National Bureau of Economic Research)*

- 
- Liberalization of Financial Services Under NAFTA and its Effect on the Environmental Performance of the Agricultural Sector in Mexico  
*Department of Sustainable Development of the General Secretariat of the Organization of American States/ de Windt, C.S., Marquez, I., Martínez, R., Ceville, O., Liu, X.*
  - NAFTA, Tourism and the Environment in Mexico  
*Martínez Meléndez, L. A. (Department of Natural Resources and Environmental Economics, University of Vermont)*
  - Tourism, Trade and the Environment: Tourism and Coastal Development in the Mexican Portion of the Mesoamerican Reef  
*Perez-Cirera, V. (World Wildlife Fund Mexico), DeFerrari, G. (World Wildlife Fund United States)*
  - Transportation Services, Air Quality and Trade  
*Fernandez, L. (Department of Environmental Sciences, University of California, Riverside)*
  - Environmental Implications of Trade Liberalization on North American Transport Services: The Case of the Trucking Sector  
*Fernandez, L. (Department of Environmental Sciences, University of California, Riverside)*
  - The Evolution of the Environmental Services Industry in Mexico, 1995–2005  
*Ferrier, G., Stubbs, G., O'Donnell-Lawson, F. (Environmental Business International, Inc.)*
  - Effects of Trade Liberalization on Provision of Urban Solid Waste Collection, Recycling, and Final Disposal Service: The Case of Mexico's Northern Border Region  
*Martínez Peralta, C. M. (Sonora State Commission for Ecology and Sustainable Development)*
  - Growth in the Supply of Municipal Environmental Services to Communities on Mexico's Northern Border (1995–2005)  
*Balarezo Vásquez, T., López, A.R. (Border Environment Cooperation Commission)*



## **Annex IV: List of Secretariat Reports**

Until 2009, the CEC published the following six Secretariat reports:

- Green Building in North America (2008),
- Electricity and the Environment (2002),
- Maize and Biodiversity (2004),
- Ribbon of Life(1999),
- Continental Pollutants Pathways (1997),
- Silva Reservoir (1995)

(CEC, no date: Secretariat Reports + links to the respective report).

## Annex V: Regional Dispersion of the two NAFTA EA Case Studies

**Figure 18: Regional Dispersion of the two NAFTA EA Case Studies**

(CEC: North American Environmental Atlas, layer Bathymetry, Shaded Relief, Political Boundaries; information added provided by Guerrero et al. 2000, Sierra Club et al. 2000)

