

# NORTH AMERICAN AGENDA FOR ACTION

2002–2004

**A Three-Year Program Plan for the  
Commission for Environmental Cooperation of North America**



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## PREFACE

In 1994, the coming into force of the North American Free Trade Agreement (NAFTA) created the world's largest trading block. At the same time, the NAFTA partners sought to build environmental safeguards into the trade liberalization pact and agreed to sign an accord, the North American Agreement on Environmental Cooperation (NAAEC), to do so. The organization created by the Agreement to carry out its provisions is the Commission for Environmental Cooperation (CEC) of North America, an international organization composed of the Council—cabinet-level environment officials from the three countries; the Joint Public Advisory Committee (JPAC), a group of five citizens from each country; and a Secretariat staffed with environmental experts.

The 2002–2004 program plan sets forth the work plan for this triennium, continuing in its implementation of NAAEC. It reflects the Council's vision for deepening cooperation, by pursuing the twin goals of furthering environmental sustainability in open markets and stewardship of the North American environment.

The 2002–2004 program plan is centered around four core program areas: Environment, Economy and Trade; Conservation of Biodiversity; Pollutants and Health; and Law and Policy. Within these areas, a number of programs are set out to further the goals and objectives of NAAEC. Specific projects are presented as a means to implement the goals of the programs. The programs will continue to evolve over a three-year cycle in response to the results achieved each year.



# INTRODUCTION

In June, 2001, the CEC Council established a long-term strategic framework for the work of the institution, reaffirming their commitment to regional environmental cooperation in the context of deeper economic, social and environmental linkages. The strategic framework incorporates six key elements:

- gathering, compiling, and sharing high-quality environmental information
- promoting the use of market-based approaches
- cooperating regionally in the implementation of global commitments
- building capacity for stronger environmental partnerships
- strengthening strategic linkages to improve sustainability, and
- promoting public participation in the CEC's work.

Council also announced new and additional efforts to make progress on environmental matters of regional concern by concentrating in four key areas, including:

- exploring further opportunities for market-based approaches for **carbon sequestration, energy efficiency and renewable energy** in North America;
- initiating the development of a North American approach to the **environmentally sound management of hazardous wastes**, recognizing the serious environmental and human health consequences of improper **tracking and disposal**;
- analyzing issues relating to **local water pricing and watershed management**, and promoting accessible, affordable technologies for improving water management; and
- incorporating the **core set of environmental indicators** of the Organization for Economic Cooperation and Development in the CEC's periodic reports on the state of the North American environment, to assess environmental outcomes and track progress in relation to environmental goals.

The 2002–2004 CEC program plan gives direction and constancy to existing work while retaining the flexibility to respond to new challenges and opportunities.

The content of the three-year program plan builds on previous consultations and evaluative exercises. In particular, during the past seven years, JPAC has convened public workshops in each of the NAFTA countries to seek input and advice on future directions for the organization. Following the public consultations, JPAC formulated specific advice and reports to Council on the strategic direction of the organization.

The 2002–2004 program plan also takes up many of the recommendations made by other advisory bodies, including the national and government advisory committees. Additionally, the plan incorporates numerous suggestions made by members of the private and public sector currently engaged in related work, including, for example, consultations undertaken on specific initiatives, such as the Sound Management of Chemicals, the North American Pollutant Release and Transfer Register, Developing Technical and Strategic Tools for Improved Air Quality in North America, and evolving work on energy and climate change.

## Approaches

The scale and scope of emerging environmental issues of regional concern call for an unprecedented degree of cooperation between and among Canada, Mexico and the United States. The CEC is mandated to help build consensus and a shared understanding of the nature, scope and magnitude of the environmental challenge in North America, and facilitate actions to address it.

The CEC promotes sustainable solutions to preserve and protect North America's natural systems by working in partnership with a growing number of private and public actors at the local, regional and global levels. Through these

partnerships, the CEC can maximize the impact of its actions and avoid duplicating the work of others by clearly defining our role and employing our unique attributes to act as convenor, catalyst, and a center for policy, research and information at the North American level. The three-year program plan presents a combination of actions and strategies employing one or more of these functions, depending on the stated objectives of the activity.

### **Role of the CEC**

The CEC can play a number of roles that can vary depending on the issue being addressed. They include:

#### **Convenor**

The CEC constitutes a unique regional forum for exploring trends, bringing key players together to develop solutions or simply exchanging views on important issues of environmental protection, conservation and sustainability. Because the CEC involves the three North American governments as well as the public through its Council, advisory committees, and Joint Public Advisory Committee, the institution is ideally positioned to play the role of the “honest broker”—to convene stakeholders from the public and private sector, and build bridges of understanding that can facilitate environmentally-preferred results.

Acting as convenor, the CEC can also facilitate the coordination of initiatives on a regional scale to enhance the efficient use of scarce human and financial resources. Network building among the scientific, academic and other non-governmental communities will help to build capacity in North America, and remains an important strategy for public participation in the work of the CEC.

### **Catalyst**

If the timing is opportune, the CEC also can act as catalyst in North America to spur on worthwhile existing initiatives, undertaken largely by others. In this capacity, the CEC serves as an engine to accelerate the regional implementation of global initiatives or accords. Through partnering and collaboration, the CEC also boosts promising initiatives requiring modest technical or financial support, greater regional profile, or improved coordination. The unique government-public constitution of the CEC again provides exceptional opportunities for catalyzing incipient actions to produce meaningful results.

### **Research and Policy Analyst**

With its trilateral staff of professionals, the expertise of governments and the growing network of scientific and academic communities involved in the work of the institution, the CEC brings high quality research and policy analysis to bear on important environmental matters of regional concern. As a regional center of research on policy and the scientific aspects of regional environmental issues, the CEC continues to provide objective, science-based information and guidance to policymakers and the public-at-large.

### **Information Hub**

In a short period of time, the CEC has established itself as an important repository of regional data and information on the North American environment. The organization’s reports, factual records, and databases empower citizens and governments by providing important regional information on our shared environment and the policies employed to protect it.



## The Program

Work of the CEC is focused around four program areas:

- Environment, Economy and Trade
- Conservation of Biodiversity
- Pollutants and Health
- Law and Policy

Each program has objectives which are achieved through projects. These projects are implemented through a variety of tools and instruments, depending on the goals and objectives sought by the CEC.

Following scoping, project implementation may involve a variety of actions or strategies. Often, pilot phases are used to test or deploy a model or strategy in a particular locale or region. The results of such pilots may provide models for others to replicate and permit designers to refine and improve strategies before expending greater resources and energy on larger-scale efforts. Projects may also employ teams of experts, working groups, multi-stakeholder committees or others to meet the objectives of the program area.

The three-year program plan includes a variety of projects spanning the spectrum from initial scoping through the later phases of project implementation. In some cases, projects are designed to end within a specified period or are intended to be continued by other institutions.

### Public Participation and Capacity Building

Public participation and capacity building in North America are central to the realization of many of the goals and objectives of sustainable development outlined in the program plan. The three-year program plan attempts to integrate capacity building and public participation activities directly into the project descriptions, adopting a holistic, crosscutting approach to program development and planning.

Many of the actions initiated by the CEC in pursuit of its mission and mandate are designed to maximize opportunities for public participation and capacity building. NAAEC embodies the commitment and belief that environmental protection and conservation efforts are enhanced and multiplied through strong mechanisms for public participation. To the greatest extent possible, the CEC incorporates effective and timely means of participating in its activities directly into specific programs and projects.

Similarly, the Parties recognize that lasting environmental protection and conservation strategies can only be sustained by building national capacities to design, implement and maintain the policies and measures that are adopted in the region. Accordingly, the CEC also builds capacity-building mechanisms, such as training, scientific and technical exchange and education, directly into the three-year program plan. As well, the North American Fund for Environmental Cooperation (NAFEC) constitutes an important mechanism for increasing the involvement of community groups in the work of the CEC and for enhancing their capacity to address environmental concerns.

### Results

The three-year program plan clearly sets forth an ambitious agenda for cooperation whose success will be easily measurable, given the clear stated objectives of each of the projects. For the institution as a whole, the CEC will continue with the following strategic objectives:

- Develop and promote policies in support of environmental protection in the context of expanded economic integration in North America.
- Facilitate the development of coordinated solutions to transboundary and continental-scale environmental challenges facing North America.
- Provide a reference point for reliable environmental information.

*As a final note, all project-related dollar amounts in the report are given in Canadian dollars (C\$) except where otherwise noted.*

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## **I - ENVIRONMENT, ECONOMY AND TRADE**

### Understanding Linkages between Environment, Economy and Trade

- 1.1.1 Assessing the Environment in the Context of North American Market Integration

### Market-based Mechanisms

- 1.2.1 Supporting Environmental Protection and Conservation through Green Goods and Services
- 1.2.2 Financing in Support of Environmental Protection and Conservation
- 1.2.3 Exploring Market-based Mechanisms for Carbon Sequestration, Energy Efficiency, and Renewable Energy in North America

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## **II - CONSERVATION OF BIODIVERSITY**

### North American Biodiversity Conservation Strategies

- 2.1.1 Strategic and Cooperative Action for the Conservation of Biodiversity in North America

### Stewardship for Shared Terrestrial and Marine Ecosystems and Transboundary Species

- 2.1.2 North American Bird Conservation Initiative
- 2.1.3 Species of Common Conservation Concern
- 2.1.4 Mapping Marine and Estuarine Ecosystems of North America
- 2.1.5 North American Marine Protected Areas Network
- 2.1.6 Closing the Pathways of Aquatic Invasive Species across North America

### Improving Information on North American Biodiversity

- 2.1.7 North American Biodiversity Information Network

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## **III - POLLUTANTS AND HEALTH**

### Cooperation on North American Air Quality Issues

- 3.1.1 Facilitating Trilateral Coordination in Air Quality Management
- 3.1.2 Developing Technical and Strategic Tools for Improved Air Quality in North America
- 3.1.3 Trilateral Air Quality Improvement Initiative: North American Trade and Transportation Corridors

### Sound Management of Chemicals

- 3.2.1 Sound Management of Chemicals (SMOC)

### North American Pollutant Release and Transfer Register

- 3.3.1 North American Pollutant Release and Transfer Register (PRTR)

### Pollution Prevention

- 3.4.1 Capacity Building for Pollution Prevention

### Children's Health and the Environment in North America

- 3.5.1 Children's Health and the Environment in North America

## 2002-2004 PROGRAM AT A GLANCE

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### IV - LAW AND POLICY

#### Environmental Standards and Performance

- 4.1.1 Comparative Report on Environmental Standards
- 4.1.2 Environmentally Sound Management of Hazardous Waste

#### Enforcement Cooperation

- 4.2.1 North American Regional Enforcement Issues
- 4.2.2 Enforcement and Compliance Capacity Building
- 4.2.3 Enforcement/Compliance Reporting

#### Environmental Policy

- 4.3.1 Sustainable Use and Conservation of Freshwater in North America

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### OTHER INITIATIVES OF THE CEC

#### Specific Obligations under the Agreement (SOUN)

#### North American Fund for Environmental Cooperation (NAFEC)

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





## ENVIRONMENT, ECONOMY AND TRADE

The Environment, Economy and Trade program has three core objectives: (a) To improve the environmental assessment of trade liberalization and expanding economic activity in North America. The environmental assessment work is both backward- and forward-looking, to ensure that lessons learned from past and current environmental impacts help guide the identification of emerging environmental issues, policy priorities and tools. (b) To identify market mechanisms that can act to support environmental protection and conservation goals. The guiding principle behind “green” markets is to translate the goal of “win-win” trade-environment links into concrete action that can be replicated in other market categories. (c) To explore the role of financing in the development of “green” market mechanisms that will favor positive environmental and energy developments, including carbon sequestration, energy efficiency, and renewable energy, and sustainable trade.

These objectives will be addressed through four projects:

- Assessing the Environment in the Context of North American Market Integration;
- Supporting Environmental Protection and Conservation through Green Goods and Services;
- Financing in Support of Environmental Protection and Conservation; and
- Exploring Market-based Mechanisms for Carbon Sequestration, Energy Efficiency, and Renewable Energy in North America

## 1.1.1 Assessing the Environment in the Context of North American Market Integration

### Project Summary

This project combines two previous projects: NAFTA Effects and Emerging Environmental Trends. Its goal is to improve environmental assessments of market integration of the North American economy, with emphasis on the environmental effects of trade liberalization in the past and in the future. The CEC remains unique among international organizations in its mandate to undertake backward-looking (or *ex post*) environmental assessments, expressed, for example, in Article 10(6)(d) of NAAEC, to undertake an “ongoing assessment” of the environmental effects of NAFTA. The CEC has learned from its past work that analyses of the environmental effects of the NAFTA need to be complemented with consideration of related international economy-wide and sector-specific policies. Forward-looking (or *ex ante*) assessment can then help with forward-looking analysis and policy recommendations. Thus, to improve environmental assessments, the 2002–04 program merges *ex post* assessments (undertaken under the former NAFTA Effects project) with *ex ante* analysis (prepared under the former Emerging Trends project). In combining backward- and forward-looking environmental assessments, the overall objective of the CEC’s work is to be proactive in clarifying policy options for both environmental and economy policy-makers. Such policy options, based on lessons learned from *ex ante* assessment, can be designed to mitigate environmental damages associated with trade expansion and economy-wide reforms, and maximize potential environmental benefits arising from market integration. This can be done by incorporating environmental decision-making in economic and trade policy decisions and economic and trade considerations in environmental decision-making, eventually leading to integrated policy making that maximizes economic, environmental and social benefits—the pillars of sustainable development.

The merged project will follow several directions:

- Facilitate the comparison of methods and lessons learned from recent and ongoing environmental reviews or strategic environmental assessments of trade policy and associated economic policy reforms. This forum includes a means by

which the NAAEC Parties can compare different approaches and results, as well as benefit from the range of experience undertaken by civil society in environmental reviews. One result of facilitating a comparison of methods and results is to improve understanding of shared environmental effects at the North American level.

- In light of considerable work underway in the area of environmental reviews by the Parties, research bodies, international organizations and others, update and refine the *Analytic Framework for Assessing the Environmental Effects of the North American Free Trade Agreement*, based on results and lessons learned from continuing work and feedback from the first symposium, and on updates coming from sector- and area-specific work in agriculture and energy, as outlined below.
- Integrate *ex post* assessments with *ex ante* environmental assessments (futures or forecasting work). Analysis will concentrate on the sector-specific level, building upon insights from the first North American Symposium on Understanding the Linkages between Trade and Environment (October 2000) and the emerging environmental trends work, in particular, its work in agriculture, forestry and freshwater, as well as the follow-up analysis undertaken in 2001, concentrating on two broad areas: agriculture—including the effects of market integration on biodiversity, forestry, and freshwater resources—and the North American energy sector. The goal of integrating backward- and forward-looking analysis is to inform and facilitate the development of appropriate and proactive policy options.
- Following the release in early 2002 of an updated Analytic Framework based on recommendations made at the 2000 symposium and ongoing assessment, issue a public call for papers, and host the second North American Symposium on Assessing the Linkages between Trade and Environment in November 2002.
- Lessons from the symposium could provide part of the basis of preparatory work aimed at holding a first NAFTA trade and environment ministerial meeting. The meeting, which will involve environment and trade ministers from Canada, Mexico and the United States, is projected to be held in 2003.

## Goals and Objectives

As the integration of the North American economy accelerates, environmental policies face new challenges. This project will help to clarify the extent to which market integration—driven by trade and trade-related investment among the NAFTA partners—directly or indirectly affects environmental quality and environmental policies. Robust environmental assessments provide a sound basis for identifying proactive policies—both in the environmental and economic policy arenas—intended to mitigate negative environmental effects of market integration, and maximize positive environmental outcomes.

## Rationale

The objective of the project is to improve policy-relevant environmental assessments of market integration and trade. In 2000, total trade among the three NAFTA partners amounted to roughly US\$700 billion. In addition to total trade, cross-border investment flows have increased significantly since 1994. As trade and investments flows have increased, so too has the exchange of technologies, management practices and regulatory experience among Canada, Mexico and the United States.

As market integration and economic globalization proceed, environmental policy continues to face new challenges as well as opportunities. Among the challenges for environmental policy makers is ensuring that as the scale of overall economic activity expands, standards, norms and regulations are sufficiently robust to anticipate and mitigate new ecological stresses. Among the opportunities that arise from market integration is the extent to which new technologies, environmental management practices, market-based approaches, consumer awareness and values themselves are shared among countries and communities. This project will focus on improving the identification of policy options that arise as the relationships between environment, trade, and sector-specific areas are clarified. The rationale for this work is found in NAAEC Article 10(6)(d), which provides for the consideration on an ongoing basis of the environmental effects of NAFTA.

A guiding assumption of the project is that rigorous environmental assessments, based on extensive data and appropriate quantitative models and robust futures work, provide a strong foundation upon which policy responses can be built. Accordingly, an important emphasis of the project is providing policy-relevant environmental assessments. The project combines the CEC's work from two formerly distinct project areas: NAFTA Effects—which involves an *ex post* approach to identify the impacts of trade on environmental quality and policy—and Emerging Trends, which comprises an *ex ante* tool intended to highlight key environmental challenges to the years 2010 to 2020.

## Progress to Date

In the summer of 1995, the CEC initiated the exploratory phase (Phase I) of the NAFTA Effects project. This focused on the main elements of NAFTA, considered dimensions of ecological quality and identified major processes that can link environmental development in Canada, Mexico and the United States to NAFTA-induced changes in trade, investment and economic activity.

In Phase II, specific issue studies were undertaken, addressing key elements of the general framework in order to enrich areas where empirical data were not available or to clarify linkages between environmental issues and trade and economic activity. These studies were subjected to expert evaluation in late 1997 and, once completed, contributed to the development of a second draft of *An Analytic Framework for Assessing Environmental Effects of the North American Free Trade Agreement (NAFTA): Phase II*. This was received by Council in 1998 and peer reviewed.

In 1999, the CEC incorporated the results of the peer review into the final draft of the Analytic Framework. The Council encouraged its application to particular sectors of the North America economy, or to particular issues of environmental significance in North America. The final draft was subject to comment through a JPAC public meeting. The public's comments were incorporated into the Analytic Framework at the end of 1999.

In late 1999, the Council issued a public call for papers, inviting the public to submit proposals that would apply the methods of the Analytic Framework. In March 2000, a newly formed advisory committee to the symposium provided advice to the Secretariat in the selection of proposals for papers received from the call for papers. Authors or groups of organizations were invited to prepare papers for the October CEC symposium, featuring broad participation from experts and the public from Canada, Mexico and the United States.

In October 2000, over 300 people participated in the first North American Symposium on Assessing the Linkages between Trade and Environment. Results from the original research papers were discussed, revised and published in 2001 in two formats: as a stand-alone, "lessons learned" report, highlighting key results of the research papers and discussions; and a full proceedings of the symposium itself.

In late 2001, the CEC Secretariat released three additional background reports as a follow-up to the symposium: (a) an analysis of the effects of market integration and trade liberalization on biodiversity, with an emphasis on agriculture; (b) implications of the evolving North American energy market for energy efficiency and renewable energy development and trade; and (c) an update of lessons learned in assessing the environmental effects of trade liberalization. This agricultural work builds on previous experience with the maize and feed cattle sectors conducted in the early development of the CEC analytical framework and the Law and Policy program work on confined animal feeding operations (CAFOs) to identify indicators and coefficients that may be needed to conduct proper environmental assessments, and will be generalized in 2002 to other agricultural sectors, including water, forestry and biodiversity.

Parallel work in the Emerging Environmental Trends project includes:

- Four background reports prepared by the Secretariat that identify different economic drivers of environmental change, as well as methods to anticipate future environmental challenges.
- The release of an abbreviated State of the Environment report, serving as a baseline for the emerging trends work.
- An online questionnaire, inviting the public to provide their input to critical and emerging environmental issues.
- Analysis of the relationship and increasing competition between agriculture and urban sprawl in the US in relation to the use of freshwater resources. The analysis used a hybrid IMPACT model to estimate natural resource competition and possible constraints involving the agricultural sector and urban expansion to the year 2025. Results of the model were released in December 2000. (The model was not applied to the other two countries because of the data intensity of the analysis.)
- The first application of materials-flow analysis to examine the forestry and agricultural sectors from Canada, Mexico and the United States. Results were also released in December 2000, based on in-house support from the Parties and in close conjunction with the World Resources Institute.
- The release of a highlights and lessons learned report of key issues related to the trends analysis, in June 2001.
- The release of two documents summarizing, all the documents produced so far by the group, in later 2001.



## Actions 2002

These two projects have benefited at different stages from working or advisory groups. This includes the NAFTA Effects Advisory Group, which convened until 1999, and the group advising the Secretariat on preparations for the 2000 North American Symposium on Assessing the Environmental Effects of Trade. This also includes the Intergovernmental Working Group on Emerging Environmental Trends, which met from late 1998 to 2000, and the Advisory Group on Emerging Trends, which met in late 2000.

Immediately following the January 2002 meeting on “Lessons Learned and Next Steps in Assessing the Environmental Effects of Trade,” a new advisory group will be created. The general mandate of the advisory group will be to provide guidance and ongoing advice to the CEC and the Secretariat on its environmental assessment work. The advisory group may be structured as follows:

- An advisory group, which comprises government officials and experts from nongovernmental bodies, including research organizations, intergovernmental organizations, the private sector and environmental groups;
- Two sub-level advisory groups. These two groups may comprise representatives working on forward-looking and backward-looking environmental assessments. The purpose of the two sub-level working groups would be to address technical issues, including data comparability, methodologies and modeling, environmental indicators and coefficients. However, it is not envisioned that these two groups would undertake distinct or stand-alone work, since the purpose of merging the projects is to realize the benefits of project integration.

General views on the structure, timing and terms of reference of the newly established advisory group will be solicited from participants during the closing session of the January meeting. A summary of views will be circulated to the Parties and participants, together with proposed Terms of Reference and next steps immediately following the meeting. Final Terms of Reference and a work schedule should be finalized by mid-March 2002.

## Overview

The aim of the 2002–2004 work plan is to advance the understanding of linkages between environment, economy, and trade, with the longer-term goal of formulating policy options designed to mitigate potential negative environmental effects and maximize positive environmental outcomes. To achieve that aim, work will include reviewing methods and tools needed to assess environment-economy linkages, with reference to the CEC Analytic Framework. Work will also deepen analysis at the sector-specific level and show links between different economic sectors and sub-sectors, including building upon analysis undertaken in 2001 in biodiversity and the energy sector (under Article 13). A main focus of work for 2002 will entail preparing for and holding the second North American Symposium on Assessing the Linkages between Trade and Environment. Steps will include issuing a call for papers, conducting peer reviews of proposals by an Advisory Group on the Environment and Economy, holding the symposium itself in November 2002, and producing the results and policy recommendations as a possible contribution to the first meeting of NAFTA trade and environment ministers, projected for 2003.

**2002**

**Estimated Resources Required (C\$)**

<b>Action 1: Update, as necessary, the Analytic Framework, based on the reviews and round table meeting</b>		<b>40,000</b>
Activity 1: Review approaches and findings from recent work in backward- and forward-based environmental assessment work of economic/trade policies. In particular, provide recommendations on comparability of approaches, tools, data requirements, methods and models between <i>ex post</i> environmental assessments and environmental futures work. Prepare expert report on technical options	10,000	↓
Activity 2: Host a meeting of governments, international organizations, NGOs, and the private sector, including the Advisory Group, to compare approaches and results. Particular emphasis of the meeting is to identify shared environmental challenges among the countries due to market integration	20,000	
Activity 3: Compare approaches and lessons learned from environmental reviews and assessments of trade	10,000	
<b>Action 2: Integrate backward- and forward-based environmental assessments</b>		<b>175,000</b>
Activity 1: Examine needs for methods, tools and baselines to combine backward- and forward-looking environmental assessments	20,000	↓
Activity 2: Further sectoral and environmental-media analysis, in two areas: agriculture and energy. In the area of agriculture, analysis will concentrate on the extent to which trade and market integration is affecting, and will likely affect to 2010–2020, forests, freshwater and biodiversity. In the area of energy, analysis will examine the extent to which the evolving North American energy market can support energy efficiency and renewable energy options. Build on the analysis of 2001 of the two sectors mentioned above to provide recommendations for further work including generalizing to other sectors and areas such as water, biodiversity, and forest	120,000	
Activity 3: Based on sectoral analysis, prepare a public workshop to identify and examine policy options for environmental and economic policy-makers	35,000	
<b>Action 3: Organize the second North American Symposium on Assessing the Linkages between Trade and Environment</b>		<b>150,000</b>
Activity 1: In January 2002, issue a public Call for Papers in support of the second symposium. In April 2002, with the assistance of the Advisory Board, make selections of researchers and groups to prepare conference papers	10,000	↓
Activity 2: Provide limited grant and research support to individuals, research groups and others in preparation of symposium papers related to agricultural and energy sector	75,000	
Activity 3: Host second North American Symposium on Assessing Linkages between Trade and Environment	65,000	
<b>Total Resources Required</b>		<b>365,000</b>

## Public Participation

A core goal of the CEC's work on assessing the environmental effects of economic policies is to ensure that its analysis is transparent and fully engages civil society in its work. Indeed, among the most important lessons of efforts to examine the environmental impacts of trade is the central role that civil society plays in improving such assessments. Examples of efforts to include civil society include the public Call for Papers; participation of over 300 people in the October 2000 symposium; the creation in 2001 of an Advisory Group—composed of experts and NGOs—supporting a survey of public views on emerging environmental trends, and providing input to a public meeting in late 2001 on trends. This commitment to public participation will continue in 2002 with the public Call for Papers in early 2002 and the hosting of a second North American symposium in late 2002.

## Capacity Building

This work aids developing a deeper understanding of trade and environment linkages outside of the field of ecological economics. The transparent and open approach used by the CEC—inviting all groups and individuals to present analyses that use the CEC framework to assess the environmental impacts of NAFTA—helps build public confidence and nuance the yes/no debate about the NAFTA/environment nexus to a more balanced debate of where and to what extent impacts occur. A balanced debate in turn facilitates the involvement of all stakeholders to prevent these effects.

## Expected Results

The project is intended to improve environmental assessments of economic policies and market integration. In so doing, it is expected to integrate different methods and

approaches to environmental reviews and assessments, including backward and forward-looking environmental analysis. The results of the second symposium will provide an important preparatory point of reference for the 2003 NAFTA ministerial meeting on trade and the environment. The project will also improve the capacity of governments, research groups, NGOs and others in preparing for future assessments of new trade and other economy-wide reforms, including for example environmental effects of market liberalization in the energy, agriculture and other sectors.

## Expected Partners and/or Participants

The CEC will actively seek partners to continue the work of understanding the environmental effects of economic policies, including the World Resources Institute, the OECD Directorate for Food, Agriculture and Fisheries OECD Policies and Environment Division, Agriculture Directorate, with the OECD working on agricultural indicators and CAFO issues, and the Environment Directorate working on outlook, the World Trade Organization, the UN Commission for Sustainable Development, the UN Convention on Biodiversity, the World Bank, research centers, NGOs and others.

## Linkages to other CEC Projects

Given the interdisciplinary nature of this project, activities will be closely coordinated with a number of other CEC projects and activities and will draw upon environmental data made available through them. These will include NABIN and others in the Conservation of Biodiversity program area, the North American Pollutant Release and Transfer Register project, the project on Developing Technical and Strategic Tools for Improved Air Quality in North America, and others.

## Actions 2003

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The CEC will continue its combined backward- and forward-looking environmental assessments, and continue providing proactive policy options for both environmental and economy policy-makers to mitigate environmental damages associated with trade expansion and economy-wide reforms, as well as to maximize potential environmental benefits arising from market integration

## 1.2.1 Supporting Environmental Protection and Conservation through Green Goods and Services

### Project Summary

The primary objective of this project is to promote biodiversity conservation and environmental protection through sustainable use by: (a) strengthening the viability and market share of green goods and services in North America; (b) facilitating the participation of small and medium-size enterprises in those markets; and (c) identifying concrete ways in which market-based instruments can be applied more fully to green goods. The project builds upon the CEC's work on environmental goods and services, financing and the environment, and market-based instruments that has been underway since 1998. Among the key lessons from our work on shade coffee, and increasingly from our work on eco-tourism and the *Chamaedorea* palm, is the importance of linking general policies and lessons regarding green goods with analysis, capacity building and the facilitation of partnerships among different market actors at the concrete, micro-economic and sectoral and sub-sectoral levels.

The project will examine specific barriers and opportunities to green goods and services contained within specific market groups and sizes of actors. The products and services to be examined in the 2002 project are: "shade-grown" coffee and the *Chamaedorea* palm.

In its examination of green goods and services, the following stages within green markets will continue to be addressed, with the goal of identifying market, pricing and information failures, as well as facilitating partnerships between different market actors of different size: (a) understanding the environmental characteristics of so-called green products and services; (b) deepening analysis of consumer interest in, and willingness to pay for, "green" products and services; (c) identifying challenges to producers in meeting green product and service criteria; (d) supporting community partnerships, in particular, in product areas (such as shade agriculture) that depend on small-scale production; (e) identifying the important role of intermediaries in brokering green goods and services; (f) supporting transparency and comparability of information and marketing tools, including environmental labeling and certification schemes; and (g) identifying options for public policy in supporting green markets. Identifying these failures in

marketing, pricing and information, and facilitating partnerships between different market actors is important to draw policy implications in general and to facilitate access to financing mechanisms covered in project 1.2.2, Financing in Support of Environmental Protection and Conservation.

To make these results more generalizable, the project will closely examine aspects of market mechanisms that are known to vary by scale of production, type, and structure of market. Drawing upon analytic work of the OECD and others, the project will also examine the use of valuation, full cost accounting, unilateral and negotiated business-environmental management approaches, and other tools in support of green goods and services.

### Goals and Objectives

The main focus of the CEC's work on market-based instruments is to improve understanding of the market characteristics and the potential for an expanded production, consumption and North American trade in green goods and services. The ultimate goal is to use results from the ongoing pilots to offer policy implications for other goods and services and geographic areas. In the shorter term, the methodology developed for shade coffee will be applied to *Chamaedorea* palm production and eco-tourism to draw conclusions on how the methodology can be generalized to these other goods and services, given their different market, demand, and pricing structures. This project examines both improved production capacities and broader consumer interest in green goods and services that foster decoupling of production and environmental damages. A key goal of the project is to broker the exchange of information among different actors within markets. Experience suggests that although the potential for green markets in North America is considerable, various impediments persist to constrain that potential, and this is especially true for smaller firms. These constraints include information failures (including access to information and transparency issues); low levels of consumer awareness and education regarding the environmental implications of purchasing habits, pricing and other market distortions arising from certain public policies; and other market constraints.

Among the specific objectives of this project are:

- furthering analysis of different environmental implications of so-called green goods and services, including analysis of the effects of increased production or consumption of such products and/or services;
- raising awareness among producers and intermediaries regarding the market potential of green goods and services;
- improving the transparency and comparability of marketing information tools, in particular, environmental labeling and certification schemes of relevance to agriculture;
- clarifying broader public policy options at the North American-level related to market-based instruments and green markets, in general; such options will build upon the OECD Sustainable Development report, providing examples of market-based instruments already in place in North America, as well as opportunities for the expanded role of such instruments;
- improving analysis and policy options regarding the role of public sector initiatives in support of market-based approaches and green markets; such options can include the creation or expansion of incentives—including fiscal or legal-based measures—the removal of disincentives or distortions (for example subsidies), and the identification of other measures that governments can implement in support of green markets (for example, green procurement policies for North America); and
- helping to identify the appropriate role of the public (policies) and private sectors (corporate responsibilities), and NGOs (e.g., training and awareness), in developing markets for green goods and services.

### Rationale

Market-based approaches have long been recognized as an important tool to support environmental objectives. However, the gap between the potential and actual realization of instruments that support green markets, and market instruments that reduce negative environmental impacts, remains substantial. Addressing the broad objectives listed above will guide the CEC's work on market-based instruments.

### Progress to Date

Among the lessons of the CEC's work on green goods and services and market-based measures thus far is that translating broad objectives of "win-win" environment-economy relationships into concrete outcomes requires analysis, capacity building, information sharing, and much dialogue among different groups within specific market segments. Progress in translating sustainable use and conservation goals into a market reality requires the linking of micro-economic analysis with appropriate capacity building, networking and other areas.

The project will build upon several CEC initiatives, including its work on shade-grown coffee, the *Chamaedorea* palm (transferred in 2001 from the project on Trade in Wildlife Species to the Green Goods and Services project), and sustainable tourism. In understanding the environmental dimensions of these products, the project will build upon lessons learned from work with: the Smithsonian Migratory Bird Center and their work on defining criteria for producers of "shade-grown coffee" (2000); the International Center for Research in Agroforestry (ICRAF), in assessing the environmental effects of shade-grown coffee, and shade agriculture generally, on flora, birds, mammals, reptiles and biodiversity (2001); Mexico's National Institute for Geography, in clarifying the link between areas of rich biodiversity and small-scale farm production (2001); Resources for the Future (RFF), in understanding rates of forest conversion in Mexico due to coffee production (2001); and on preliminary results from work on the *Chamaedorea* palm in Mexico (CEC 2001), and results from the sustainable whale watching project in the Baja to Bering priority ecological region.

The project will also consolidate lessons learned from previous CEC market assessments of demand-side issues. This includes the most extensive North American consumer analysis of potential demand for shade-grown coffee (1999); a market study of consumer interest in sustainable tourism (2001); a market assessment and experts' meeting on the *Chamaedorea* palm, with an emphasis on price and export volume fluctuations at the *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad*—Conabio (2000) and CEC Montreal (2001); an assessment of industry attitudes to green goods and services, including institutional procurement

issues (2001); an industry market survey of sustainable coffee, and (in conjunction with the *Comisión Nacional para el Ahorro de Energía—Conae*) a survey of the largest commercial electricity consumers in Mexico, measuring interest in, and willingness to pay for, renewable electricity (2001).

A main focus of the project will continue to be the challenges facing small-scale producers and providers, communities and intermediaries in supporting green markets. Experience suggests that a major cause of market failures in green markets is the separation of different market actors. Increasingly the role of NGOs in filling this gap is being recognized. For instance, the CEC has convened a number of meetings, workshops and seminars with small-scale producers, including coffee farmers and cooperatives (Oaxaca, March 2000, and San Cristóbal, 2001); with sustainable tourism operators and other stakeholders to develop market-based approaches to sustainable tourism (La Paz, March 2001); and with electricity producers and consumers (November 2001). Proceedings from the LaPaz meeting have been translated and put on the Web. Based on recommendations included in that document, the tourism project was concluded through an initiative to bring the ecotourism sector, an important constituency, into the Marine Protected Areas (MPA) network of the Baja to Bering (B2B) priority ecological region, in the hope of: (a) strengthening the network and demonstrating its value as well as that of the MPA and B2B Action Plan frameworks; and (b) supporting sustainable tourism initiatives and the communities that benefit from them by bringing them into the B2B/MPA process. This effort will open a dialogue regarding what constitutes sustainable tourism in and around MPAs and build a Toolkit to reach out to tourists and local communities.

This work complements the CEC's work on community partnerships in support of green goods, including with various small-scale farmers and cooperatives (2001), as well as building upon the valuable lessons and networks that have arisen from NAFEC project work. The CEC has also convened several meetings with producers and brokers of coffee and other products, to provide information on market opportunities for shade-grown farm produce, including the chameadorea palm and other goods. These include meetings with coffee buyers and brokers (New York, Miami and Montreal, 2001),

as well as with cooperatives—for instance, supporting the newly created Mexican Council for Sustainable Coffee.

Another major focus of the CEC's work has been to improve the transparency and comparability of market and consumer information related to green goods and services. Examples of the CEC's work thus far in this area include the overview report on environmental labeling, certification and procurement schemes in place in North America (1999), the release of a Compendium of *In Situ* Sustainable Tourism in North America (2001), the release of an updated version of four searchable databases for green goods and services covering: (a) coffee labeling and certification schemes; (b) sustainable or ecotourism certification schemes, codes of good practice, voluntary guidelines and other initiatives; (c) office products, with an emphasis on energy efficiency-related products; and (d) "green" electricity, studying third-party certification schemes for "green" electricity and their criteria, environmental marketing guidelines for electricity, renewable electricity definitions and renewable portfolio standards (RPS) from electricity restructuring legislation, along with other information available at: <[http://www.cec.org/pubs\\_info\\_resources/databases/index.cfm?varlan=english](http://www.cec.org/pubs_info_resources/databases/index.cfm?varlan=english)>.

Based on CEC's past three years' experience working in coffee, it is clear that microcredit is one of the major reasons for the small market share of shade-grown coffee. To attract private funds, the profitability and limited risk of shade coffee systems must be demonstrated. We surveyed industry, farmers and financiers to gather the information that lenders would want before agreeing to participate in a shade agriculture fund, and prepared a prospectus containing estimates of the economic and financial returns from shade coffee production systems. In the process it became clear that other products grown with coffee represent a large share of total revenues, and thus the fund was reoriented toward shade agriculture (agroforest systems) more generally. Because the literature and experience thus far do not present clear-cut models easily applicable to cost-effective microcredit delivery, the remaining hurdle is to design such a model that meets most of the credit demand and has a low default rate. Thus, the CEC observed and studied the entire production/consumption chain from the financier, to the producers, to the preparation and commercialization of

coffee, to its export to consuming countries and to its final sale. This enabled us to:

- determine where resource allocation, management, infrastructure, information flow etc. could be improved;
- identify which actors are best suited to do each improvement: governments, NGOs, the coffee industry, financiers;
- recommend policies, economic instruments, institutions and infrastructure development for each actor along the coffee production/consumption chain; and
- demonstrate convincingly to the private sector that it is profitable to invest in a coffee agroforestry fund.

It is not the intention of the CEC to run the fund, but rather to demonstrate its potential profitability and environmental advantages.

## Actions 2002 Overview

In 2002, the Environment, Economy and Trade program area will continue to build its expertise on green goods and services and search for innovative ways to promote sustainable production, consumption, wildlife conservation, and trade of these goods and services. The sustainable coffee work will focus on the shade agriculture fund and extrapolating lessons learned from this extensive work to the work on the *Chamaedorea* palm. Based on already acquired expertise on the various goods and services, cross-cutting issues will be identified and generalized to other products. In addition, the project will build upon lessons learned in examining green markets, to identify options for policy in supporting private markets for green goods and services, including pricing, incentive and procurement options.

## 2002

## Estimated Resources Required (C\$)

<b>Action 1: Examine and support partnerships for green goods and services in North America in shade agriculture produce</b>		<b>120,000</b>
Activity 1: Continue facilitating capacity building and meetings between different market actors within the shade agriculture and palm sectors—for example producers, intermediaries, brokers, certification bodies and retailers/ consumer groups—to identify constraints and opportunities to expanding environmentally sustainable North American markets for shade agriculture produce and palm. Host two workshops in 2002 with producers and intermediaries to examine ways of improving partnerships	60,000	
Activity 2: Present CEC market analyses to large-scale buyers, brokers, and industry representatives by convening workshops on demand-side issues and opportunities for shade agriculture and palm produce	30,000	
Activity 3: Examine opportunities to improve transparency and comparability of labeling and certification schemes among Canada, Mexico and the United States, including opportunities for mutual recognition and equivalency of standards. This initiative will comprise maintaining and expanding the CEC database on green goods and services and hosting a meeting of relevant stakeholders	30,000	
<b>Action 2: Identify broader public policy options needed to support “green” markets</b>		<b>75,000</b>
Activity 1: Examine opportunities related to “green” public procurement, and issue an updated report of recent trends in public and institutional procurement activities	30,000	
Activity 2: Host a meeting of governments, the private sector and the public on barriers and opportunities to “green” procurement in North America. Special emphasis will be put on the respective roles of the public, private, and NGO sector in support of these markets by scale of operations and in cooperation with OECD, the World Bank and others. Publish an analysis of how specific market-based measures—such as fiscal policies—are meeting the goal of increasing the share of green goods and services in the North American market	45,000	
<b>Total Resources Required</b>		<b>195,000</b>

## Public Participation

Consultations with selected stakeholders, including the private sector producers, market intermediaries such as brokers and buyers, cooperatives and communities, and others, form the foundation of the CEC's work on green goods and services.

## Capacity Building

An important element of this project is to build the capacity of small and medium-size farmers to engage in North American commerce and gain access to microcredit. The material prepared by the CEC also helps inform cooperatives and others in the coffee industry and the public-at-large about the benefits of producing and consuming green goods and services, both for the economy and the environment. The material includes, but is not limited to, information about the environmental characteristics of green goods and services and relevant market and pricing structures compared to their mainstream counterparts.

## Expected Results

An important result of this project will be to provide greater understanding of the practical requirements for mutually beneficial results in market development and conservation and environmental protection. The project will help quantify production, consumption and trade opportunities in agriculture and ecologically fragile areas (including pro-

tected areas), based on lessons learned from these projects. In addition, it will help identify and quantify the possible effects of different economic and trade policies and other instruments. This will include the potential role of labeling and certification, impediments to the marketing of green goods and services, criteria equivalency and mutual recognition of different schemes, as well as the effects of different trade measures. Recommendations will be made to the Parties on how to develop more supportive policies for green goods and services.

## Expected Partners and Participants

Expected partners will include producers/providers, distributors, marketing retailers, consumer groups, environmental and conservation groups, international organizations concerned with sustainable development, labeling and certification bodies, financial intermediaries and other stakeholders involved in agriculture.

## Linkages to other CEC Projects

This project is conducted jointly with the Conservation of Biodiversity program area, including NABCI. This project will also build upon a number of recent (1998 and 1999) NAFEC projects concerned with Mexican shade-grown coffee, bird conservation and biodiversity-related issues, and certification and labeling of non-timber forest and other products.

## Actions 2003-2004

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The CEC anticipates continuing study and work on market-based mechanisms, including the role of green goods and services and procurement policies in securing environmental protection and biodiversity conservation in future years



## 1.2.2 Financing in Support of Environmental Protection and Conservation

### Project Summary

The objective of this project is to increase private financing measures that support environmental protection goals in North America. The role of the private financial services sector in supporting environmental goals is critical. Despite progress, challenges remain in bridging the gap between the information requirements, operational procedures and goals of the financial sector, and environmental goals. Such challenges include identifying indicators and other information that communicates financial risk and investment opportunities related to the environment as well as the typical difficulties associated with cost-effective delivery of credit to support green markets..

To follow on previous CEC work two areas are covered in this project. First, efforts will be placed on identifying and brokering partnerships in support of environment-related financing. In recent years, there has been growing recognition of the convergence between the environmental and financial service agendas. The environment represents an important, dynamic, growing business area for two reasons: (a) environmental management is closely linked to business and financial risk management and (b) the environmental goods and services sector represents an important investment opportunity. The CEC will continue its work in identifying information and financial analysis needed by the financial services sector, in particular, debt, equity and venture capital finance, in supporting investments in green markets. Second, the project will focus on ways environmental information—and, in particular, information related to environmental risk—is relevant to improving transparency and stability in financial markets. The project will examine how environmental information is disclosed in financial markets, and how regulatory officials in financial and other sectors make use of and respond to environmental information. Analysis will concentrate on the energy sector—including “upstream” activities of relevance to that sector.

### Goals and Objectives

The main goal of this project is to encourage expanded production, consumption and international trade of “green” markets. Experience shows that efforts to support green markets in “win-win” trade-environment links require not only the appropriate public policies, but also innovative partnerships with the private sector.

Among the priorities of the project will be to identify and quantify business opportunities in selected areas of the green goods and services sector. The goal is to expand access to financing and credit in these markets, including (where appropriate) access to micro-credit—both directly through project financing as well as indirectly through supporting market measures. The project will work with the financial services sector and the NGO community to identify ways in which private-public partnerships can be deepened and strengthened.

The project will focus on the following objectives:

- Examine what kind of information is needed to ensure the financial viability of investments related to green goods and services. In particular, examine the kind of indicators and other information investors require to meet returns on investment and financial risk-related objectives.
- Identify lessons from the support of the Shade Agricultural Fund that can be applied to other sectors.
- Facilitate partnerships between different actors within the financial services sector, to provide targeted information on environmental opportunities in green markets.
- Strengthen the way in which environmental information is assessed by financial markets.
- Compare information disclosure requirements among the three NAAEC countries, examining the extent to which financial regulations impede or promote broader goals of environmental protection. In examining information disclosure requirements, undertake a literature review of how different indicators and environmental management systems are taken into account by financial regulators, investors and capital markets more generally.

## Rationale

The link between environmental protection and the financial services sector has been recognized for some time, and covers two broad areas: the extent to which financial markets can internalize environmental costs and benefits in pricing signals in general; and the availability and conditions of private financing to support environmental goods, including through the investing in green goods and services. Increased private sector funding of environmentally-preferred investments are critical to advancing conservation, and human and ecosystem health.

## Progress to Date

In 2001, the CEC undertook several initiatives in the field of financing and the environment. Examples include release of the report on “Investment Opportunities for Small and

Medium-size Enterprises in Mexico in the Climate Agenda,” work with the financial services sector in North America and Europe in support of the Shade Agricultural Fund; preliminary analysis comparing security exchange rules in Canada, Mexico and the United States regarding the disclosure of environmental information; a joint meeting in early 2002—organized by the CEC and Cespedes (*Centro de Estudios del Sector Privado par el Desarrollo Sustentable*)—on financing and the environment; and work with the Conservation of Biodiversity program area of the CEC on financing and biodiversity.

## Actions 2002 Overview

This project will focus on two areas: lessons learned from other sectors in establishing the Shade Agricultural Fund and analysis at the sector-specific level on how environmental information disclosure is used and can affect capital markets.

## 2002

## Estimated Resources Required (C\$)

<b>Action 1: Further analysis in support of the creation of Environmental Funds for North America</b>		<b>90,000</b>
Activity 1: Identify partners, data, analytic gaps, and additional work needed in support of the Shade Agricultural Fund	50,000	↓
Activity 2: Examine opportunities to extrapolate lessons learned from shade fund to one other area, the renewable energy sector	40,000	
<b>Action 2: Examine how environmental information is disclosed and used in financial markets</b>		<b>50,000</b>
Activity 1: Compare information disclosure provisions among the three countries, focusing on the agricultural and energy sectors	30,000	↓
Activity 2: Convene a meeting of investors, financial regulators, industry representatives and the public on environmental performance, information disclosure and financial performance. Develop policy options for Council	20,000	
<b>Total Resources Required</b>		<b>140,000</b>

## Public Participation

This project is designed to support increased partnerships with the private sector and to clarify links between financing and various market measures, including labeling, voluntary initiatives by industry, and other measures. An important emphasis of the project will be to encourage an ongoing exchange of information between environmental, producer and consumer groups involved in green markets and the financial services sector.

## Capacity Building

An important objective in encouraging mutually beneficial relationships between the financial services sector and community, environmental and other groups that support an environmental agenda is providing relevant information and support to environmental, conservation and other groups in the field on how to encourage partnerships that are truly “win-win.” Among the goals of the project will be a needs assessment to help community, environmental and other groups build beneficial relationships.

## Expected Results

Improved information about financing characteristics of green markets, increased investment and policy opportunities arising from green markets, stronger participation by the private sector and other groups in green markets, and clarification of the role of public policies and market mechanisms in supporting investments in green markets.

## Actions 2003–2004

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The CEC anticipates continuing study and work on financial mechanisms, focusing on issues central to the work program and the use of environmental data in financial analyses and markets

## Expected Partners and/or Participants

Along with the specific industry stakeholders, the CEC expects to involve in this project selected representatives of the private financial services sector, including commercial and investment banks, insurance and re-insurance sectors, pensions and other funds, representatives of relevant international and other organizations, including the World Bank, United Nations Environment Programme (UNEP), the World Business Council for Sustainable Development (WBCSD), the Organisation for Economic Cooperation and Development (OECD) and various environmental and other groups. JPAC has expressed a particular interest in this project.

## Linkages to other CEC Projects

This project will inform NAFEC grant making; it will also be closely linked to the Conservation of Biodiversity program area. This project builds on the green goods and services project identified needs to work in the credit aspect of green market development.

### 1.2.3 Exploring Market-based Mechanisms for Carbon Sequestration, Energy Efficiency, and Renewable Energy in North America

#### Project Summary

This project was created in response to the 29 June 2001, Guadalajara CEC Council communiqué, directing the Secretariat “to explore further opportunities for market-based approaches for carbon sequestration, energy efficiency, and renewable energy in North America.”

The project will build upon the CEC’s work thus far in market-based approaches in support of environmental goals, with a particular emphasis on the identification of opportunities at the North American level related to the use of market-based instruments for carbon sequestration, energy efficiency and renewable energy.

#### Goals and Objectives

The main goals of this project are three-fold:

- First, the project will identify different market-based instruments that have been used, or are under consideration, to reduce and sequester carbon. Particular emphasis will be placed on identifying market-based instruments that have been used, or are under consideration for possible future use, in the context of energy efficiency and renewable energy. An illustrative list of such instruments includes environmental labeling and certification schemes, emission trading mechanisms, incentives and related fiscal and tax policies, institutional procurement schemes, green pricing initiatives.
- Second, the project will identify those market-based instruments that appear to offer significant potential, in furthering the goal of carbon sequestration and reduction. Particular emphasis will be placed on market-based instruments that present opportunities for cooperation at the North American level.
- Third, the project will provide analysis of potential next steps in the use of market instruments in relation to carbon sequestration, energy efficiency and renewable energy.

#### Rationale

In recent years, the potential of market-based instruments to support environmental goals has been widely recognized. By harnessing the power of markets, environmental policies can realize environmental objectives in cost effective and efficient ways.

Market-based approaches have long been recognized as important tools to support environmental objectives and their role in the carbon sequestration, energy efficiency, and renewable energy is increasingly being analyzed. Studying the complex relationship between these three goals in a North American environment will help provide concrete mechanisms and policies available to the citizens of North America to address the energy-environment dilemma posed to them in a globalizing world.

#### Progress to Date

The CEC has acquired experience in the electricity markets through its 2001 initiative on Environmental Challenges and Opportunities of the North American Electricity Market and on the market-based mechanisms project that show that efforts to support green electricity require not only the appropriate public policies, but also innovative partnerships with the private sector. For example, in October 2001, the CEC released the results of a joint CEC-Conae market survey examining the potential interest in, and willingness for the industrial sector in Mexico, to pay for renewable energy. In November 2001, the CEC released an updated version of its online database on “green” energy initiatives: these include timely and comparable information on energy efficient products, renewable “portfolio” standards and initiatives, and green pricing initiatives.

In 2001, the CEC released a report on “Mexico and Emerging Carbon Markets,” examining the potential role of small and medium-size enterprises in Mexico in participating in market-based approaches to addressing the climate agenda. Also in November 2001, the CEC invited the Parties, the private sector, consumer groups and communities to an informal meeting to explore barriers and opportunities for renewable energy in the context of the evolving North American energy market.

### Actions 2002 Overview

The project will start with an exploratory meeting with key stakeholders from industry, consumer groups, environmental organizations, investors, academia, and government on climate change opportunities, with an emphasis on energy efficiency and renewable energy. Based on that meeting, options for action will be presented to the public and Council for consideration.

## 2002

### Estimated Resources Required (C\$)

<b>Action 1: Explore opportunities to develop a North American market-based approach to carbon sequestration, renewable energy and energy efficiency</b>		<b>190,000</b>
Activity 1: Develop a discussion document identifying market-based instruments with the potential to encourage carbon sequestration, energy efficiency, and renewable energy	<i>35,000</i>	
Activity 2: Convene a meeting with key stakeholders from industry, consumer groups, environmental organizations, investors, academia, and government to discuss the issues in the discussion document; to identify those instruments that present opportunities for cooperation at the North American level; and to identify next steps. Allow for a period for public comment	<i>45,000</i>	
Activity 3: Finalize the document, to be presented to Council before their June 2002 meeting, which: outlines those market-based instruments for encouraging carbon sequestration, energy efficiency, and renewable energy, that present opportunities for cooperation at the North American level, and provides an analysis of these instruments and recommendations for next steps	<i>110,000</i>	
		<b>Total Resources Required 190,000</b>

## **Public Participation**

This initiative will help build effective trilateral public and private sector partnerships to employ market-based mechanisms to reduce greenhouse gas emissions. It is anticipated the JPAC will play a key role in shaping the means of involving, and interacting with, public during and after the period of public comment on options identified by key stakeholders.

## **Capacity Building**

To be determined once actions are selected.

## **Expected Results**

Improved information about the opportunities and market-based mechanisms available for supporting carbon sequestration, energy efficiency, and renewable energy in North America will help find cost-effective solutions to a cleaner and more efficient North American energy market. This initiative will identify and pursue promising avenues of North America cooperation to reduce emissions of carbon dioxide to the atmosphere.

## **Expected Partners and/or Participants**

Expected partners will include providers, distributors, consumer groups, environmental and conservation groups, international organizations concerned with climate change and energy efficiency, labeling and certification bodies, financial intermediaries and other stakeholders involved in energy.

JPAC has expressed a particular interest in this project.

## **Linkages to other CEC Projects**

This project clearly builds on Article 13, green goods and services and financing projects. It will collaborate with the Pollutants and Health program area to explore North American clean energy options.

## **Actions 2003–2004**

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The CEC anticipates continuing study and analysis of the barriers and opportunities for using market-based mechanisms to foster renewable energy, energy efficiency, and carbon sequestration in North America

## CONSERVATION OF BIODIVERSITY

North America hosts a wealth of spiritually cherished, economically important, and ecologically essential landscapes and seascapes. A great deal of North American biological diversity, however, is in peril. Although most problems affecting the North American environment are on the national level, certain others are shared by two of the three countries, and the effects and consequences of some of them have the potential to affect the entire continent.

## Goals

In the context of increasing economic, trade and social links, the Conservation of Biodiversity Program promotes cooperation among Canada, Mexico and the United States in furthering the conservation, sustainable use and sharing of benefits of North American biodiversity. With the direction and guidance from the Biodiversity Conservation Working Group, the Secretariat will start implementing the Strategy for the Conservation of Biodiversity, a long-term agenda to catalyze trilateral conservation action at the North American level, by:

- Contributing to the maintenance of the ecological integrity of North American ecoregions;
- Contributing to the mitigation, reduction and eventual elimination of current and future threats to North American shared species and ecosystems;
- Fostering a continental and integrated perspective to the management, conservation and sustainable use of biodiversity;
- Strengthening the capacity of a wide array of sectors of North American society to conserve the continent's biodiversity; and
- Promoting wide public involvement in the conservation, sustainable use and the equitable sharing of benefits of North American biodiversity.

## Program Initiatives

The CEC establishes a forum for coordinated, continental solutions to key conservation challenges, as well as provides a more targeted geographical focus and interdisciplinary approach to conservation activities. The implementation of the program is described in further detail under the following work plan:

### North American Biodiversity Conservation Strategies

- Strategic and Cooperative Action for the Conservation of Biodiversity in North America

### Stewardship for Shared Terrestrial and Marine Ecosystems and Transboundary Species

- North American Bird Conservation Initiative
- Species of Common Conservation Concern
- Mapping Marine and Estuarine Ecosystems of North America
- North American Marine Protected Areas Network
- Closing the Pathways of Aquatic Invasive Species across North America

### Improving Information on North American Biodiversity

- North American Biodiversity Information Network



## 2.1.1 Strategic and Cooperative Action for the Conservation of Biodiversity in North America

### Project Summary

The Strategy for the Conservation of Biodiversity (hereafter: the Strategy) seeks to enhance cooperation among Canada, Mexico and the United States in furthering the conservation, sustainable use and equitable distribution of benefits of North American biodiversity, in particular, its migratory and transboundary species as well as shared and critical habitats and corridors. Effective participation and collaboration of a wide range of sectors of society is essential to address common threats and opportunities in the three countries.

The Strategy operates at both the continental and regional scales, guided with the support of the Biodiversity Conservation Working Group, and evaluated at the regional level through appropriate performance indicators that will be agreed upon by the Biodiversity Conservation Working Group. The Strategy will operate within a 15-year period and will set a broad framework for achieving the strategic aims, objectives and subsequent “Priorities for Action.” Once the Strategy is adopted by the Council, five-year Action Plans will be developed. The Action Plans will identify the fundamental work needed to realize each set of five-year “Priority Actions.” These Actions will be fully elaborated into projects to be undertaken by the CEC Secretariat, within the three-year planning process of the CEC.

### Goals and Objectives

Specific objectives include:

- Helping to safeguard the ecological integrity of key ecosystems in North America by promoting collaborative networks;
- Fostering the collaboration required to ensure the conservation and recovery of North American migratory and transboundary species;
- Taking stock of the continent’s natural endowment and improving the understanding of the state of North American biodiversity;
- Promoting effective participation of North American society in planning and implementing conservation measures;
- Responding to common threats facing North American biodiversity; and
- Taking advantage of opportunities arising from the expansion of regional trade.

### Rationale

The Strategy aims to foster a continental, integrated perspective to the management, conservation and sustainable use of biodiversity and equitable distribution of benefits; contribute to the maintenance of the ecological integrity of North American ecoregions; and contribute to the mitigation, reduction and eventual elimination of current and future threats to North American shared species and ecosystems. The Biodiversity Conservation Working Group, constituted at the 2001 Council session, will provide guidance and direction on all biodiversity conservation issues related to North America for the CEC Conservation of Biodiversity program. This Strategy is a long-term agenda that shall guide the CEC in its catalytic efforts to help stakeholders achieve effective, efficient, and mutually beneficial biodiversity conservation in North America.

### Progress to Date

This project builds upon previous and current work of CEC, as well as on other work of regional relevance, to create strategies for biodiversity conservation in North America. Previous work of the CEC in this area has included *Ecological Regions of North America*, and *Terrestrial Ecoregions of North America: A Conservation Assessment* (a project undertaken in partnership with the World Wildlife Fund) and *Securing the Continent’s Biological Wealth: Towards Effective Biodiversity Conservation in North America—Integrated Baseline Summary*. In 2000, input and feedback was obtained through various forums and from numerous North American stakeholders, including academics, government agencies, the private sector, and NGOs. Also, in a workshop of North American experts in the fields of ecology, conservation biology and environmental studies, fourteen priority regions were identified by their ecological significance, conservation threat, and opportunities. In 2001, the results gathered were reviewed and incorporated into the development of the CEC’s preliminary Strategy for the Conservation of Biodiversity, defining lines of action the CEC could take on various themes in the short, medium and long term. A “North American Roundtable on the Biodiversity Conservation” was held in Montreal, in March 2001. Key experts from North American conservation organizations, and members of the biodiversity sub-group of JPAC reviewed and provided feedback on the draft Strategy.

The CEC's 2001 Council meeting endorsed the need for the biodiversity strategy and mandated the establishment of a working group to provide guidance and direction for the finalization and implementation of it (Council Resolution 01-03). The working group is composed of government and nongovernmental representatives.

**Actions 2002 Overview**

During the period 2002–2004, work will move from the North American scoping stage to continental- and regional-scale planning, implementation and evaluation. Existing and past initiatives such as the North American Bird Conservation Initiative (NABCI), Species of Common Conservation Concern (SCCC), Marine Protected Areas Network, Trade in Wildlife Species, Sustainable Tourism and other program-related work will be reviewed as potential tools for conservation in each of the targeted geographic regions. The monitoring and evaluation framework agreed upon by the working group will bring long-term guidance on the implementation of the Strategy. The Biodiversity Conservation Working Group will provide guidance and direction to CEC's Conservation of Biodiversity Program, and an effective means will be developed for ensuring the participation of indigenous peoples and other stakeholders in CEC biodiversity-related work. The Secretariat will provide the working group with an update on the status of the different

activities of the Conservation of Biodiversity program. The Biodiversity Conservation Working Group will review the strategy and recommend priorities for CEC action prior to the 2002 Council Session.

**Public Participation**

Public participation has been and will continue to be an indispensable component of each phase of the implementation of the Biodiversity strategy. Efforts will be continued in coordination with JPAC and the National Advisory Committees to solicit public feedback and the active participation of a broad range of stakeholders.

**Capacity Building**

The Strategy for the Conservation of Biodiversity recognizes the different approaches and successful experiences in managing and conserving biodiversity between the three countries. To ensure the successful implementation of the Strategy, outreach activities and capacity building, involving biodiversity managers and the needs of other stakeholders, will be identified. Objective number 4 of the Strategy, "Promoting effective participation of North American society," is aimed at fostering multidisciplinary, trinational networks and training, as well as effective exchanges of information and experiences among key stakeholders.

**2002**

**Estimated Resources Required (C\$)**

Action 1: Convene Biodiversity Conservation Working Group	25,000
Meeting of the working group	
Finalize the Strategy	
Agree on a monitoring and evaluation framework for the Strategy	
Provide recommendations on priority actions to Council	
	25,000
	<b>Total Resources Required 25,000</b>

## Expected Results

Expected results from this project include:

- A long-term agenda to guide CEC in its catalytic efforts to achieve effective, efficient, and mutually beneficial biodiversity conservation in North America.
- The Biodiversity Conservation Working Group will review, evaluate and provide guidance on the overall work of the CEC in the area of biodiversity conservation.
- Trinational networks to ensure stakeholder involvement and expert guidance in relevant aspects of program design and implementation.
- Action Plans developed and implemented in CEC priority regions.\*
- Initiatives to support capacity building and training in priority regions and themes.
- The Biodiversity Conservation Working Group will agree on performance indicators by variables to be measured and scales to be used.

## Expected Partners and/or Participants

Partners and participants, including those from the academic community, environmental nongovernmental organizations, municipal, state/provincial and federal governmental agen-

cies, indigenous/local communities, the private sector, and, in particular, JPAC and the Biodiversity Conservation Working Group, will be important contributors to the process of implementation, evaluation and review of the Strategy. Stakeholders from these areas will be involved in the development, implementation evaluation and review of the Regional Action Plans as well.

## Linkages to other CEC Projects

This project will continue to be carried out in consultation with numerous other CEC programs to devise an integrated approach to biodiversity conservation for the CEC.

## Actions 2003 Overview

In 2003, the implementation of the Strategy will be ongoing and the monitoring system will be established. The Biodiversity Conservation Working Group will convene, as required, to evaluate and provide guidance on the CEC's biodiversity work

## 2004

The CEC anticipates continued implementation of the Strategy with guidance from the Biodiversity Conservation Working Group.

## Actions 2003

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### Action 1: Continue implementing the Strategy with the guidance of the Biodiversity Conservation Working Group

Activity 1: Convene Biodiversity Conservation Working Group meeting(s)

Activity 2: Continue support of a mechanism for public participation

Activity 3: Support the implementation of concrete actions identified in the Strategy, including monitoring and assessment of biodiversity indicators

Activity 4: Support the development of financial mechanisms in priority regions

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### Action 2: Second Round Table on Biodiversity Conservation

Activity 1: Hold the Second North American Round Table on the Conservation of Biodiversity to promote a creative dialogue on priority issues, emerging approaches and best practices related to conservation, sustainable use and the sharing of benefits of biodiversity

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\* "CEC Priority Region" is defined as a geographic unit of land and/or water that results from the convergence of priorities defined through ecological significance, threats and opportunity criteria. A region represents an intermediate scale between the locality and the subcontinent and can comprise parts of one or more ecoregions (CEC 1997, *Ecological Regions of North America: Toward a Common Perspective*).

## 2.1.2 North American Bird Conservation Initiative

### Project Summary

NABCI seeks to build a continental network of public and private organizations to support the conservation and protection of birds and bird habitats in North America. In 2002, the North American Bird Conservation Initiative (NABCI) will enter its third year of implementation of its five-year national action plans.

### Goals and Objectives

The goal of NABCI is to enhance cooperation among existing bird conservation organizations to achieve effective protection of birds in North America. The specific objectives for 2002 are as follows:

- Facilitate the development of North America priority actions and their implementation.
- Implement a coordinated series of on-the-ground initiatives to conserve bird populations in North America.
- Partially support the administrative body responsible for designing and coordinating national actions within NABCI.
- Ensure the long-term success of NABCI by supporting the development of financial mechanisms associated with NABCI's funding strategy and opportunities emerging from the sustainable coffee project in the Environment, Economy and Trade program area.
- Evaluate NABCI's performance and CEC's future involvement.

### Rationale

The North American Agreement on Environmental Cooperation (NAAEC) calls for action to encourage conservation of wildlife and its habitat, and specifically the protection of species in danger of extinction.

North America boasts a remarkable number and variety of wild flora and fauna, and each country is committed to conserving its biological treasures. Joint action between the three countries is necessary to ensure the survival of trans-boundary species, species that are threatened or endangered, or species that play a critical role in the functioning of ecosystems. Bird populations are important indicators of the overall health of biodiversity because they respond quickly to changes and stresses in ecosystems. They are also well studied and understood in terms of their ecological roles.

Although international coordinated efforts have begun for certain groups of birds—for example, the North American Waterfowl Management Plan (NAWMP) has been successful in conserving aquatic birds—a similar effort has been needed to coordinate the conservation of all bird species in North America. NABCI was launched in response to this need.

In 1996, the Council called for the formulation of an initiative and action plan for cooperative efforts to conserve North American birds based on common goals, objectives and perspectives. In 1999, this mandate was fulfilled with the creation of the NABCI Strategy and Action Plan. The Strategy and Action Plan delineates “broad strategies [that] are essential for the effective conservation of North American birds” and specific actions that the CEC can follow in its continued support of NABCI during the following three years. The actions outlined below recognize and build upon the NABCI Strategy and Action Plan, providing the initial impetus to ensure that NABCI is fully implemented.

In order to ensure the long-term success of NABCI, a financial funding strategy was developed by NABCI's national coordinators in 2001; similarly, financial opportunities will be sought through links with other programs such as the sustainable coffee project in the Environment, Economy and Trade program area.

## Progress to Date

The CEC's work to identify important bird areas was the first step in creating a North American bird conservation initiative. This project brought together organizations from each country and resulted in the identification of more than 150 such areas throughout North America.

In 1998, more than 125 experts from the three countries met in Puebla, Mexico, to review a draft action plan for the conservation of North American birds. Based on the feedback provided by these experts, lines of action (or "themes") were defined in the areas of mapping, conservation objectives, monitoring, implementation, and financial support. This led to the development of a strategy for NABCI and an action plan for the CEC initiative. These documents were completed and subsequently approved by Council in June 1999. In Resolution 99-03, Council reiterated its commitment to North American birds by maintaining continued support of NABCI for a three-year period.

In 1999, the CEC established NABCI trinational and national steering committees and national coordinators, launched a bird-related pilot project in the North American Biodiversity Information Network (NABIN), and activated NABCI Net, the initiative's web-based information system, which will be updated in 2001–2002.

Also in 1999, as a follow-up to the Puebla meeting, a US group developed the report *A Proposed Framework for Delineating Ecologically-based Planning, Implementation, and Evaluation Units for Cooperative Bird Conservation in the US*—the first step in the process for North America. Subsequently, a map of Bird Conservation Regions of North America was created based on the CEC report *Ecological Regions of North America*.

Since 2000, the Trilateral Committee on Wildlife and Ecosystem Conservation and Management embraced NABCI as a North America-wide strategy for bird conservation. Coordinated national strategies and action plans were completed.

A second meeting of North American bird conservationists was held in Querétaro, Mexico, 14–16 February 2001, with the goal of producing a five-year NABCI plan with measurable objectives. The component bird plans: North American Waterfowl Management Plan (NAWMP), Partners in Flight (PIF), Waterbirds and Shorebirds, are well linked to the National NABCI Committees, and each is modifying its operations to be increasingly continental in scope and inter-linked with each other. To aid integration and outreach activities of the various NABCI members, a communication strategy will be launched in 2002, together with the implementation of trinational demonstration projects.

Moreover, collaboration with CEC's Environment, Economy and Trade program area continues, promoting partnerships for green goods and services with sustainable coffee and the *Chamaedorea* palm. These efforts are part of the activities started in 1998 to "initiate cooperation on the production of shade coffee as a sustainable development activity complementary to the goals of conservation of bird habitat" (CEC 1998 annual program).

Finally, in CEC's 2001 Council meeting, ministers indicated their support for NABCI and requested a progress report to be produced in 2002.

## Actions 2002 Overview

In 2002, the CEC will continue its support of NABCI, moving from building institutional support for NABCI to implementing action plans, establishing a mechanism for performance evaluation, and stimulating the development of legal and policy recommendations. These activities will be carried out in close collaboration with the NABCI National Coordinators.

<b>Action 1: Support the operation of NABCI national committees</b>		<b>105,000</b>
Activity 1: Support national steering committees and national coordinators to implement the national strategies related to the five-year NABCI plan; related activities include: initiating the establishment of effective infrastructure for delivery of bird conservation at the level of Bird Conservation Regions, defining the basis for monitoring mechanisms and evaluation frameworks, promoting outreach through broadening NABCI partnerships at a national level	<i>105,000</i>	↓
<b>Action 2: Implement NABCI demonstration project</b>		<b>100,000</b>
Activity 1: Support the implementation of one or more demonstration project(s), jointly with the involvement and guidance of National NABCI Committees, to illustrate the on-the-ground effectiveness and leveraging potential of the NABCI approach. The demonstration project(s) will support highly visible NABCI projects beneficial to birds of concern to Canada, Mexico and the United States. The first step has been completed, namely establishing criteria and a list of potential NABCI demonstration projects	<i>100,000</i>	↓
<b>Action 3: Capacity building—help to build bird conservation capacity together with NABCI national constituencies</b>		<b>25,000</b>
Activity 1: Hold a workshop addressing the status of bird populations of North America. The goal is to ensure comparable, compatible and complementary information on bird distribution and conservation assessments, among the three North American countries, as a basis for continental bird monitoring efforts	<i>25,000</i>	↓
<b>Action 4: Strengthen communication and outreach activities</b>		<b>10,000</b>
Activity 1: Implement communication strategy as an integral component of fundraising and marketing efforts, continue to support links between conservation and ecological institutions that have information resources relevant to NABCI and NABIN	<i>10,000</i>	↓
<b>Action 5: Review of NABCI</b>		<b>10,000</b>
Activity 1. As requested by Council, a review will be produced on the planning achievements of NABCI in preparation for the ensuing “on-the-ground” work to be carried out through the demonstration projects. The review will be carried out by the NABCI national committees	<i>10,000</i>	↓
<b>Total Resources Required</b>		<b>250,000</b>

## Public Participation

There is widespread recognition that biodiversity, including aquatic or terrestrial habitats, will be protected according to its perceived value. A considerable proportion of priority ecological areas in the North American region is in private hands. Having the owners of those lands or waters participate in this initiative will thus be crucial for the conservation of North American species, their habitats, and other natural phenomena. This project will identify mechanisms for governmental and nongovernmental participation in the conservation of biodiversity, both in protected natural areas and in sites not protected by government decrees or regulations.

## Capacity Building

Efforts for the protection of birds and their habitats are being carried out in each North American country, but significant gaps still exist and many bird populations continue to decline. Through the development of an infrastructure of capable individuals, institutional commitment, and the promotion of training for professional ornithologists, government officials primarily at municipal and state levels, managers, and conservationists, NABCI is helping to fill the gaps in bird conservation for the benefit of all North American birds. Special attention will be given to developing a status of the birds of North America and related conservation institutions.

## Expected Results

- NABCI institutional structures increasingly self-reliant, initially in Canada and the United States
- One or more NABCI demonstration projects, identified and supported with the assistance of CEC funds
- A unified bird assessment program based upon maps and shared databases for all bird species in North America
- An operating, long-term financial strategy and mechanism for NABCI

## Expected Partners and/or Participants

Several agencies and organizations have played an important leadership role in building NABCI, and are expected to continue as partners and/or participants in the future. Among them are the American Bird Conservancy, Bird Studies Canada, the Canadian Nature Federation, the Canadian Wildlife Service, Cipamex, Conabio, *Dirección General de Vida Silvestre* and *Instituto Nacional de Ecología*, Ducks Unlimited, Environment Canada, the Faculty of Sciences of the *Universidad Nacional Autónoma de México* (UNAM), *Société de la faune et parcs de Québec*, *Fundación Ara*, the Long Point Bird Observatory, the National Audubon Society, the North American Wetlands Conservation Council (Canada), the North American Waterfowl Management Plan, Pronatura, the Tennessee Wildlife Resources Agency, the US Environmental Protection Agency, the US Fish and Wildlife Service, the *Universidad de San Nicolás de Hidalgo, Michoacán*, and the Wildlife Management Institute. Other partners for this project—too numerous to mention here—include governmental agencies, for instance through the Canada/Mexico/United States Trilateral Committee for Wildlife and Ecosystem Conservation and Management, NGOs, local communities, the forest products industry, as well as universities and scientific research centers involved in the Puebla and Querétaro meetings.

## Linkages to other CEC Projects

Work on NABCI will proceed closely with the Species of Common Conservation Concern (SCCC) project, coordinating activities and actions related to SCCC birds, particularly, grassland species, as well as the marine species of common conservation concern, developed under the North American Marine Protected Areas Network. The results of the Financing and the Environment project, particularly those stemming from the initiatives on sustainable coffee and the *Chamaedorea* palm, will aid in the development a

financial plan for NABCI. Further development of the North American Biodiversity Information Network (NABIN) project will: a) be carried out in consultation with NABCI users, so as to enhance the usefulness of NABIN, and b) include the potential linkages to conservation and ecological institutions involving NABCI, further broadening the information resources of NABIN. To enhance the information system for NABCI, the web site <www.NABCI.org> will be linked with the CEC information portal.

## Actions 2003-2004

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Based on the review of NABCI, the working group will provide advice to Council regarding the nature of further CEC involvement with this project.

The envisioned priority areas will be:

- 1) Strengthening NABCI structure,
- 2) Continue support to NABCI demonstration projects,
- 3) Establish a mechanism to monitor bird conservation in North America. In 2004, the CEC will assess the evolution of NABCI as a self-sustaining initiative.



## 2.1.3 Species of Common Conservation Concern

### Project Summary

This project is intended to promote the conservation of a selected group of 17 migratory and transboundary species of birds and mammals (the species of common conservation concern—SCCC) and their habitats, through enhanced collaboration among the three North American wildlife services together with a diverse array of stakeholder groups, and the promotion of joint conservation initiatives. Given that a majority of the SCCC are associated with grasslands primary attention will be provided to species associated with this ecosystem.

### Goals and Objectives

The goal of this project is to support the conservation of migratory and transboundary species and their habitats.

The specific objectives are:

- Development and implementation of recovery action plans in support of the conservation of priority species, commencing with grassland species, appropriate for collaborative action; and
- Promote awareness of the importance of grasslands and the decline of prairie-dependent wildlife.

### Rationale

Grasslands are considered among the most imperiled ecosystems worldwide. This situation also applies for North America, where the decline in grassland area (e.g., tall-grass prairie) since 1830 has exceeded that reported for any other major ecosystem. As a result of habitat loss and fragmentation, endemic grassland bird species show more consistent, widespread and steeper declines than any other group of North American bird species. Many conservation initiatives have been carried out to protect this ecosystem at a national and binational level, especially within and between Canada and the US. Mexico's potential importance, however, cannot be overstated. Recently, the three Wildlife Services of North America have agreed to work together to protect 17 species of wild birds and mammals considered "Species of Common Conservation Concern" (SCCC). Given that the majority of these species are associated with grasslands, the CEC is currently focusing on grasslands and organized a

workshop, with the assistance of the three governments, to establish the foundations of a conservation strategy for these species. One of the key results of this workshop was the elaboration of a shared vision. This vision emphasizes the need to protect grassland species through the conservation of their habitat. Achieving this vision will require an enhanced understanding of the current status and trends of grasslands throughout North America; the identification of areas of conservation and protection priority; addressing current grassland use practices, and the development of outreach efforts. Achieving success will require the participation of diverse stakeholders, especially the engagement of landowners and the collaboration with ongoing grassland species conservation initiatives.

### Progress to Date

In 1999, representative officials from the three governments identified a group of species of common conservation concern for collaborative action. For this stage in the project, the Parties chose terrestrial avian and mammalian species. CEC prepared a report drawing upon the inventories of national agencies (*Comisión Nacional para el Conocimiento y Uso de la Biodiversidad*—Conabio, Fish and Wildlife Service, and the Canadian Wildlife Service, among others) as well as additional information on endangered and threatened species provided by conservation organizations and scientific experts. This report, *Species of Common Conservation Concern in North America* <[http://www.cec.org/files/PDF/BIODIVERSITY/SCCC-Web-e\\_EN.pdf](http://www.cec.org/files/PDF/BIODIVERSITY/SCCC-Web-e_EN.pdf)> addresses the conservation status and the associated conservation programs of transboundary and migratory species, with special emphasis on species of concern in each country. Since seven of the 17 species identified are closely associated with one ecoregion (grasslands; as per CEC's 1997 *Ecological Regions of North America: Toward a Common Perspective*), it has also served as a tool for identifying priority regions to focus CEC's work on biodiversity conservation. In 2000, this report was endorsed by the CEC Council and supported by the Canada/Mexico/United States Trilateral Committee for Wildlife and Ecosystem Conservation and Management.

As a follow up in March 2001 the CEC organized a workshop in Nuevo Casas Grandes, Chihuahua, Mexico, to develop the basis for a trinational strategy for the conservation of grassland species of common concern. The workshop involved

government representatives from Canada, Mexico and the United States, as well as representatives from NGOs, academia and landowners. In April 2001, the CEC presented the results of the workshop to the Canada/Mexico/United States Trilateral Committee For Wildlife and Ecosystem Conservation and Management, and its Executive Table supported the development of a strategy for achieving the vision established by the Chihuahua grasslands workshop.

Following the recommendations of the workshop, three main activities were developed in 2001: 1) an assessment of collaboration opportunities with Mexico based upon grassland conservation priorities at a national scale; 2) an updated map of grasslands, based upon the CEC level II ecoregions; including conservation planning units such as the Important Bird Areas (IBAs) and Bird Conservation Regions (BCRs); and 3) a draft strategy and action plans for the conservation of grasslands and grassland-related species to serve as a framework for the implementation of selected recovery activities.

### **Actions 2002 Overview**

The actions for 2002 will promote building a trinational strategy for grasslands conservation aimed at the conservation of shared species and the identification of key recovery-related projects of identified grassland priority habitats and species.

### **Public Participation**

A communication strategy will be developed to effectively disseminate information about the importance of trinational cooperation to accomplish the conservation of grassland species of common concern. Education programs will be geared toward involving the general public, in conservation activities—with special attention to ranchers and farmers to promote their participation—and increasing public awareness on the economic, cultural and ecological importance of grasslands.

## **2002**

### **Estimated Resources Required (C\$)**

<b>Action 1: Finalize grassland strategy and facilitate the implementation of grassland conservation pilot projects, including recovery action plans</b>		<b>100,000</b>
Activity 1: Hold a trinational workshop to review, revise and endorse the trinational grassland strategy, and identify the key action plans and projects for the conservation, restoration or enhancement of grassland habitat and species	40,000	
Activity 2: Support pilot projects exemplifying the importance of trinational cooperation in the conservation of shared grassland species of common conservation concern	60,000	
<b>Action 2: Develop a communication strategy to convey the importance of trinational efforts to protect grassland species of common conservation concern</b>		<b>10,000</b>
<b>Total Resources Required</b>		<b>110,000</b>

## Capacity Building

It is expected that the strategy will help identify gaps and opportunities for capacity building and sharing of information and experience within and among the different groups interested in grasslands conservation. Moreover, a trinationally finalized strategy may also enhance the capacity to raise funds by stakeholders.

The strategy and resulting map and databases will be made available to the public, which shall contribute to concerted action and foster institutional and technical capacity building toward the conservation of grassland ecosystems.

## Expected Results

- A trinational grasslands strategy
- Updated trinational maps showing the status of grasslands
- A trilateral recovery plan for grassland species of common conservation concern
- One or more grassland species-related pilot project(s) of trinational scope
- Trilateral recovery plans for other species of common conservation concern (longer term).

In partnership with the Canada/Mexico/United States Trilateral Committee for Wildlife and Ecosystem Conservation and Management and other stakeholders, concrete action will be taken to conserve migratory and transboundary species of common conservation concern. The importance of habitat conservation and protected areas will be highlighted as a measure to achieve species conservation.

## Actions 2003

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Action 1: Continue pilot projects related to selected species of common conservation concern

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Action 2: Further communication and outreach activities

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Activity 1: Implement communication strategy to convey to the citizens of North America the importance and results of trinational efforts to protect species of common conservation concern

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Action 3: Develop a framework for evaluating SCCC performance and determine future work, including other non-grassland SCCC

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## Expected Partners and/or Participants

Current partners include the Canadian Wildlife Service, the *Dirección General de Vida Silvestre* for the *Instituto Nacional de Ecología*, the US Fish and Wildlife Service, the Canada/Mexico/United States Trilateral Committee for Wildlife and Ecosystem Conservation and Management and Conabio, as well as the Species Survival Commission (SSC) of IUCN and agencies related to parks and protected areas such as Parks Canada, *Consejo Nacional de Áreas Naturales Protegidas* (Conanp) and the National Park Service. Academia, indigenous peoples, NGOs, as well as state, provincial and municipal governments, farmers and ranchers, will be sought as partners as the action plans are developed and implemented.

## Linkages to other CEC Projects

In the past, this initiative has helped prioritize geographical regions in North America for the Strategy for the Conservation of Biodiversity. This initiative is also closely linked to NABCI respecting those birds and bird habitats of mutual interest in the prairie ecosystem

## 2004

In 2004, the CEC will assess its involvement in the SCCC project, based on the evaluation conducted in 2003. The Biodiversity Conservation Working Group will help determine the sunset date for SCCC.

## 2.1.4 Mapping Marine and Estuarine Ecosystems of North America

### Project Summary

This project coordinates the development of comparable marine and estuarine ecosystem and habitat classification systems incorporated by the Parties into a North American geographic information system (GIS). It provides the critical step needed in the identification of key biodiversity areas for conservation, restoration, or sustainable use. In turn, this will serve other strategic needs, such as the development of a representative system of marine and coastal protected areas for North America. This activity is closely coordinated with project 2.1.5, North American Marine Protected Areas Network.

### Goals and Objectives

The goal of the project is to provide a common mapping framework and habitat and ecosystem classification system for conservation and sustainable use of marine and coastal ecosystems at a continental scale. Specifically, the project will:

- facilitate the development by the Parties of a GIS-based map of major meso-scale marine and coastal ecological regions in North America with accompanying descriptions of the regions in each level; and
- initiate a marine gap analysis to provide managers, planners, scientists, and policy makers with the information they need to set priorities for the conservation of coastal and marine ecosystems.

### Rationale

The need for information on North America's marine and estuarine ecosystems and their resources has never been greater. As development of the coastal zone and exploitation of offshore resources increase, more and more marine organisms, including fish, marine mammals, and sea turtles, and whole ecosystems (e.g., coastal wetlands and coral reefs) are facing increasing threats. Currently, there is a lack

of tools to identify critical areas for conservation at a regional scale and to provide objective measurements of changes in aquatic resources or of the success of management policies and restoration efforts. A targeted approach is needed to make best use of both human and financial resources.

Underlying this targeted approach is basic ecological knowledge about ecosystems and their status. However, it is difficult to gauge the status of North American biodiversity without a common framework for mapping and assessing the continental environment (as was done by the CEC in earlier work for terrestrial ecological regions of North America). Thus the first step in catalyzing effective regional biodiversity conservation is to agree upon a common methodology for defining ecological regions. These ecological regions can then be used as both baselines for periodic assessment, and, perhaps more importantly, frameworks for cooperation to efficiently conserve habitats and the biodiversity that such habitats support.

### Progress to Date

Building on existing efforts in the three countries, by the end of 2001 a trinational task force will have worked together to review the existing initiatives and assessed the gaps found in current North American marine mapping initiatives. A "straw-man" map will have been developed, reviewed and fine-tuned during an expert workshop.

### Actions 2002 Overview

For 2002, the key outcome of this activity will be the production of a GIS-based map of major meso-scale marine ecological regions in North America and the development of the report *Marine and Estuarine Ecological Regions of North America* (available in both hard copy and web versions).

## Public Participation

Although the development of North American regional marine and estuarine ecosystem and habitat classification systems and GIS maps will rely upon academic, government and NGO technical experts from the three countries, the results will provide an invaluable tool for a much wider and more effective public dialogue on conservation priorities in the three countries. Currently, decisions on the location and benefits of protected areas are made in a primarily local context, with little information on how protection in one area will influence overall biodiversity conservation goals. The identification and mapping of major marine and estuarine ecosystems and habitats will facilitate the identification of distant stakeholder groups that may be affected by management actions (for example, regional fisheries whose resources depend upon certain habitats during critical life history stages). The project will further involve the public-at-large through the production of outreach materials and maps, and these materials will be made widely available through existing web sites.

## Capacity Building

This project will increase capacity in all three countries to identify, characterize and map ecosystems and habitats and biodiversity in marine and coastal environments. Each country in the region has individual experience in aspects of this approach that will benefit the combined effort. This project will identify needs as well as potential partners for the implementation of transboundary marine conservation activities.

## Expected Results

This project will bring together existing approaches for marine and estuarine ecosystem and habitat characterization and mapping in Canada, Mexico and the United States, so as to support decision-makers in setting conservation priorities and actions. It will provide a tool explicitly intended for assisting networking and setting priorities for marine protected areas in North America—building on the companion Marine Protected Areas Network project. It has and will provide:

- identification and compilation of ongoing approaches, experts and databases in the three countries—this information compilation is the first step for any coordinated approach to gap analysis;
- development of consistent and comparable approaches to marine and estuarine ecosystem and habitat classification;
- production of a GIS-based map of major meso-scale marine and estuarine ecological regions in North America; and
- improved capacity of managers, planners, scientists, policy makers and other stakeholders to assess the nature, conditions and trends of the major marine and coastal ecosystems of North America.

## 2002

## Estimated Resources Required (C\$)

Action 1: Develop Geographic Information System (GIS)-based map of major meso-scale marine and estuarine ecological regions	40,000
Action 2: Publish the <i>Marine and Estuarine Ecological Regions of North America</i> publication outlining habitat and classification systems, describing the major marine and estuarine ecological regions of North America	100,000
<b>Total Resources Required</b>	<b>140,000</b>

## Expected Partners and/or Participants

This initiative seeks to bring together the many organizations and agencies that are mapping the marine and estuarine environments of Canada, Mexico and the United States to develop a comparable marine and estuarine ecosystem and habitat classification for North America. The leading partners include the Association for Biodiversity Information, the Canadian Council on Ecological Areas, *Comisión Nacional de Areas Naturales Protegidas*, Conabio, *Instituto Nacional de Ecología*, Natural Resources Canada—GeoAccess Division/National Atlas of Canada, the National Oceanic and Atmospheric Administration, Wildlife Habitat Canada, and World Wildlife Fund (WWF—Mexico).

## Linkages to other CEC Projects

This project will be very closely linked with the work of the North American Marine Protected Areas Network and the Strategic and Cooperative Action for the Conservation of Biodiversity in North America. Once it has been developed, the GIS-based map of major meso-scale marine and coastal ecological regions in North America will also be used by the North American Biodiversity Information Network (NABIN) and the North American Inventory and Clearinghouse for Marine Conservation. The project would also provide a geographic biodiversity context for finer-scale activities, such as those related to conserving North American biodiversity in priority regions—such as the Baja California to the Bering Sea (B2B) priority ecological region.

### 2004

This project will be completed in 2002.

## 2.1.5 North American Marine Protected Areas Network

### Project Summary

The ecological linkages between Marine Protected Areas (MPAs), including migratory patterns and life history stages of various species, suggests the need for improved collaboration in the establishment and management of MPAs. A network of MPAs provides better protection of marine biodiversity than can be achieved by managing MPAs in isolation. The North American Marine Protected Areas Network, coordinated by the North American Commission for Environmental Cooperation (CEC) in collaboration with IUCN's/World Commission on Protected Areas' North American Marine Working Group, aims to enhance and strengthen the conservation of marine biodiversity in critical marine habitats throughout North America by creating functional linkages and information exchange among existing and planned marine protected areas.

### Goals and Objectives

The goal of this project is to establish a network of North American MPAs to enhance and strengthen the protection of marine biodiversity in North America by linking the existing MPAs in all three countries. Specifically, the project seeks to:

- protect critical marine and coastal habitats and North American biodiversity by sharing effective conservation approaches and by developing cross-cutting conservation initiatives;
- enhance collaboration among the three countries to address common challenges inherent to the protection of marine biodiversity and to jointly prioritize conservation actions;
- build regional, national and international capacity to conserve critical marine and coastal habitats by sharing lessons learned, new technologies and management strategies, and by increasing access to relevant information; and
- facilitate the future design and establishment of a globally representative system of MPAs throughout North America and the world, as called for by IUCN.

### Rationale

Marine protected areas are effective tools for safeguarding and conserving critical coastal habitats throughout the varied regions of North America. Although many MPA sites and programs already exist, they are largely operating independently, with relatively little exchange of information, strategies, or lessons learned. Moreover, no single MPA can be large enough to protect ecologically important areas on a regional scale. A network of properly managed and coordinated MPAs, however, can do so effectively and efficiently. A strategic and well-designed network of MPAs can accrue enormous benefits by securing the continent's richest and most valuable habitats, focusing management and conservation action at the most ecologically critical places, and presenting little opportunity cost due to the restrictions being spread out over a much wider geography.

Also, while individual MPA sites provide valuable local protection for marine biodiversity, more effective conservation could be achieved if the various sites in North America collaborated and forged meaningful linkages and partnerships.

### Progress to Date

Presently, over 250 people from various governmental, non-governmental, academic, indigenous and private sector organizations are participating in the activities proposed by CEC's the North American Marine Protected Areas Network in its Action Plan.

The North American MPA Network arose from a trilateral workshop in November 1999, which subsequently produced proceedings and an associated Action Plan (available at [http://www.orchestrabycrossdraw.com/marinet/Notice.cfm?Notice\\_ID=39](http://www.orchestrabycrossdraw.com/marinet/Notice.cfm?Notice_ID=39)).

The Action Plan included seven areas of recommended action:

- Valuing Economic Benefits of MPAs
- Mapping Marine and Estuarine Ecosystems of North America
- Guidelines for Measuring MPA Effectiveness
- Integrated Management Planning
- Expanding Applied Research for MPAs
- Developing an Ocean Ethic
- Protection Standards.

Activities are now being initiated to implement the majority of them while some have a North American-wide focus and others on the sub-region of the Pacific Coast of North America, also known as the Baja California–Golfo de California to Bering Sea (B2B) region.

The CEC is stewarding this initiative in two ways. First, it is supporting the identification of trinational conservation priorities (species and areas) and complementary mechanisms to measure the effectiveness of MPAs. Second, it is ensuring that communication among stakeholders, the network of MPAs, and the institutional framework, which provides leadership and coordination in the region, are strengthened and effective.

In order to advance the initiative in this manner, the following activities are being implemented:

- Establishing trinational conservation priorities
- Identify Marine Species of Common Conservation Concern (MSCCC)

Through this initiative (in support of the *Protection Standards* section in the MPA Action Plan), governments, NGOs and marine conservation scientists are working together to develop a list of migratory and transboundary species of trinational importance at risk. To produce the list, a workshop was held to build consensus on the methodology to be used for identifying priority species (Monterey Workshop, 1 May 2001). The results of the meeting can be found on MariNet <<http://www.orchestrabycrossdraw.com/marinet>>. By spring 2002, a trilingual report on the MSCCC will have been developed which describes the status of the species, and identifies opportunities for collaboration.

### Identify Priority Areas within the Baja to Bering region

This initiative (in support of *Integrated Management Planning* and *Expanding Applied Research for MPAs*) seeks to identify the highest priority areas to protect in the Exclusive Economic Zone off the West Coast of Canada, Mexico and the United States—an essential first step towards establishing a network of marine protected areas along the Pacific Coast of North America. The priority areas map will focus the attention of all players on the resources that most deserve protection, serving as a means of catalyzing viable systems of marine protected areas from Baja to Bering. To produce the map, a strategy-building session, involving marine conservation NGOs, governmental agencies, inter-governmental organizations, and fisherman's organizations, was held to build consensus on the methodology to be used for identifying priority areas (Monterey Workshop, 2–3 May 2001). The results of the meeting can be found on MariNet <<http://www.orchestrabycrossdraw.com/marinet>>. Presently, through a partnership with the Marine Conservation Biology Institute (MCBI), the best available scientific data and traditional ecological knowledge are being compiled.

### Mapping Marine and Estuarine Ecosystems of North America

Drawing upon and bringing together existing work in the three countries, this initiative (a stand-alone project of the Conservation of Biodiversity program that is closely linked to and supports the NA MPA Network) seeks to identify and coordinate the development of a marine and estuarine ecosystem classification system to be incorporated into a North American GIS-based map. Presently, a trinational task force is developing a “straw man” map of levels I–III. In the last quarter of 2001, this proposed mapping scheme will be presented, reviewed and modified in a trinational workshop. Subsequently, this framework will be used to help identify and manage MPAs.



### Identifying Marine Conservation Targets and Indicators

This initiative (in support of *Guidelines for Measuring MPA Effectiveness*) is helping to provide a realistic appraisal by scientists of the ability of MPAs to achieve specific goals, and how these goals will be measured. During a workshop held 2–3 May 2001, the development of a generic framework to gauge management effectiveness was initiated. By the end of 2001, these results will have been incorporated into broader practices focused on employing effectiveness measures in the successful management of MPAs.

### Building Networks and Capacity

#### Create North American Inventory and Clearinghouse for Marine Conservation

In coordination with the CEC's NABIN portal, the Department of Fisheries and Oceans (DFO), the *Comisión Nacional de Areas Naturales Protegidas*, NOAA, IUCN's World Commission on Protected Areas (North American Marine), Ramsar and other international initiatives, governmental and NGO partners, the CEC is working to develop a marine conservation inventory for MPA managers, NGOs, decision makers, academics and other users to support the North America MPA network (in support of *Integrated Management Planning, Expanding Applied Research for MPAs, Guidelines for Measuring MPA Effectiveness* and general communications). This visual, geographical information system (GIS)- and collaborative web-based tool will provide information on the essential elements of North American marine conservation initiatives. Using the data from existing Canadian, Mexican and US inventories, this tool will allow users to access different North American databases through different query capabilities (i.e., by clicking on a MPA site on a map, or through name or theme searches). It will also facilitate communications and provide a vehicle for members of the North American MPA Network to inform each other about important marine conservation-related documents, events, and issues. Moreover, it will serve as an international clearinghouse for information on MPA effectiveness, illustrating trends in important variables (e.g., top predators, economically important fish, and Marine Species of Common Conservation Concern). In the spring of 2001, the CEC's MariNet <<http://www.orchestrabycrossdraw.com/marine>>, a joint collabora-

tive web tool, was enhanced, and by the end of 2001, a prototype for the portal will have been developed based on feedback received from MPA practitioners and decision makers.

#### Strengthen institutional capacity of the Baja California to Bering Sea Marine Conservation Initiative

In support of *Integrated Management Planning*, the CEC is partnering with the Baja California to Bering Sea (B2B) Marine Conservation Initiative to bring together NGOs, government, scientists, and interested individuals to help restore and conserve the unique biodiversity and productivity of the Pacific Coast of North America through a linked network of marine protected areas. In 2001, the various stakeholders involved in the B2B initiative developed a Strategy for marine conservation in the region. The Strategy can be found on MariNet <<http://www.orchestrabycrossdraw.com/marinnet>>.

#### Build capacity for NA MPA practitioners

In support of *Integrated Management Planning, Protection Standards* and *Guidelines for Measuring MPA Effectiveness* in the Action Plan, MPA practitioners of North America will be brought together in spring 2002, to identify MPA commonalities and needs (including those to be fulfilled by the *North American Inventory and Clearinghouse for Marine Conservation*, and the work on *Targets and Indicators*).

#### Support sustainable whale watching in MPAs along the B2B Coast

The NA MPA Network, in coordination with the Environment, Economy and Trade program of the CEC, has been looking at ways to bring the private sector together with conservation-minded organizations to develop "win-win" scenarios (in support of *Valuing Economic Benefits of MPAs*). In 2001, the CEC conducted a market study of North American sustainable tourism. This study will serve as a tool to educate mainstream tourist industries/activities about the benefits of sustainable tourism. In March 2001, the two programs jointly organized a workshop (La Paz, Baja California Sur, Mexico) on whale watching and MPAs in the B2B region to develop jointly a market-based strategy for sustainable tourism supporting the conservation of shared species and critical habitats in the B2B coastal region. As a result of the workshop, a report is being developed (to be completed by

the end of 2001) that outlines recommendations on how the three countries can work together cross-sectorally on sustainable tourism and whale watching in the B2B region. Also as a result of the workshop and as part of 2001 activities, in coordination with the Baja California to Bering Sea (B2B) Marine Conservation Initiative and NOAA, the CEC is fostering and enhancing a dialogue and partnership among regional leaders, focusing primarily on the development of a Sustainable Whale Watching Toolkit. The Toolkit will help reach out to tourists and local communities about sustainable tourism practices and the importance of MPAs, and will contain components such as common guidelines for sustainable whale watching in MPAs, as well as a Sustainable Whale Watching Fact Sheet, both for the B2B region. Together with the Environment, Economy and Trade's green goods and services lessons learned report, and the sustainable tourism and whale watching workshop report, this toolkit will wrap up the CEC's efforts in sustainable tourism and strengthen the capacity of regional stakeholders to conserve and protect their environment.

## Actions 2002 Overview

Work in 2002 will continue on identifying and building support for trinational conservation priorities and the strengthening of capacity in the region.

## Public Participation

Success of MPAs and associated networks depends to a large degree upon public awareness, support and participation in the planning and management of MPAs. From network design to local implementation at specific MPA sites, the public has been and will be increasingly involved in this endeavor. As well, the academic community, indigenous groups and NGOs involved in marine protected areas will be consulted for their input into establishing linkages and developing priorities. As the process evolves, general outreach materials, such as the B2B brochure, will be developed for explaining to a broad audience the benefits that will accrue to marine biodiversity from this project's cross-cutting initiatives.

## 2002

## Estimated Resources Required (C\$)

<b>Action 1: Trinational Conservation Priorities</b>		<b>130,000</b>
Activity 1: In a workshop of experts from various sectors, identify priority areas within the Baja-to-Bering region. Develop and collect supporting materials, including information on network development, marine and coastal base maps, ecological regions maps (including CEC's <i>Marine Ecological Regions of North America</i> map), and relevant priority areas databases	90,000	↓
Activity 2: Present priority areas map and related materials to key decision makers and other stakeholders in the Baja-to-Bering region. The CEC will explore partnering and cost-sharing opportunities for holding a meeting to discuss key marine conservation initiatives in this region	40,000	
<b>Action 2: Capacity Building, Outreach and Publications</b>		<b>110,000</b>
Activity 1: Publish and distribute MSCCC report	30,000	↓
Activity 2: Continue development of the <i>North American MPA Inventory and Clearinghouse</i>	30,000	
Activity 3: Support the outreach strategy to promote and educate stakeholders about the value of linking Marine Protected Areas	15,000	
Activity 4: Support capacity building for MPA practitioners, including ongoing MPA managers' meetings and exchanges	35,000	
<b>Total Resources Required</b>		<b>240,000</b>

## Capacity Building

The fundamental purpose of creating an integrated, interactive network of North American MPAs is to build global capacity, sharing information on lessons learned about effective conservation strategies, emerging threats to protected areas, and funding or outreach opportunities. It is anticipated that all members of the network will benefit equally from this exchange. Training of MPA managers is considered at the core of the MPA network, and its first workshop is to be held in the year 2002.

## Expected Results

The North American MPA network will produce two distinct but related results. First, it will create an alliance of MPAs throughout North America that continues to share critical information to improve the efficacy of marine biodiversity conservation efforts at the regional, national and international level. Secondly, it will result in a number of specific cross-cutting conservation initiatives that will enhance the protection of biodiversity among participating sites.

## Expected Partners and/or Participants

The following agencies and organizations have played an important leadership role in building the North American MPA Network, and are expected to continue as partners and/or participants in the future: Canadian Parks and Wilderness Society (CPAWS), Department of Fisheries and Oceans (DFO), Marine Conservation Biology Institute (MCBI), National Oceanic and Atmospheric Administration

(NOAA), Ramsar, Conanp, *Secretaría de Medio Ambiente y Recursos Naturales* (Semarnat), *Instituto de Ecología de Xalapa*, WCPA North America—Marine of IUCN, and World Wildlife Fund (Mexico). Although too numerous to mention here, other partners for this project, developed in part from the 1999 North America MPA Workshop, the 2000 and 2001 Baja to Bering meetings as well as the 2001 Monterey Work managers, governmental agencies, NGOs, academia local communities, indigenous groups and the private sector.

## Linkages to other CEC Projects

This project is closely linked to the project, Mapping Marine and Estuarine Ecosystems of North America, the Environment Economy and Trade program, the North American Biodiversity Information Network portal, as well as potentially the Sound Management of Chemicals project: 1) the maps produced by the Marine and Estuarine Mapping project will serve as the first step in the development of a marine gap analysis. This analysis will provide important guidance in the development of the MPA network activities; 2) the North American Marine Protected Areas Network project is working with the Environment Economy and Trade program to help conservationists tap into the economic benefits of MPAs; 3) the North American Inventory and Clearinghouse for Marine Conservation is being developed closely with NABIN.

## Actions 2003

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### Action 1: Continue to implement the North American MPA Action Plan

Activity 1: Continue implementation of priority area activities identified in the North American Marine Protected Areas Action Plan, including those related to: 1) evaluating economic benefits of MPAs; 2) mapping marine and estuarine ecosystems of North America; 3) developing guidelines for measuring MPA effectiveness; 4) integrated management planning; 5) expanding applied research for MPAs; 6) encouraging an “ocean ethic”; and 7) developing protection standards

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Action 2: Hold a workshop of the North American Marine Protected Areas and North American Marine and Estuarine Mapping groups to begin the marine gap analysis work

## 2.1.6 Closing the Pathways of Aquatic Invasive Species across North America

### Project Summary

This project seeks to protect marine and aquatic ecosystems from the effects of aquatic invasive species. The initiative will assist the North American countries to develop a coordinated, multinational prevention and control campaign aimed at eliminating pathways for the introduction of invasive species among the coastal and fresh waters of Canada, Mexico and the United States.

### Goals and Objectives

The fundamental goal of this project is to eliminate pathways of transboundary exchange of invasive alien species among coastal and freshwater ecosystems of Canada, Mexico and the United States. The work involves developing targeted, multinational, multilingual prevention and control programs tailored to the unique needs of North American aquatic ecoregions.

### Rationale

#### *Background*

Every day, vitally important coastal aquatic ecosystems around the world are silently transformed and degraded by alien invaders—plants and animals that evolved elsewhere and are brought to new habitats as a result of human activities. The impacts of invasive species can be severe, devastating healthy ecosystems and undermining the local economies they support. Once established, invasive species can displace important native species, drive rare species to extinction, decimate the biodiversity and trophic structure of coastal ecosystems, compromise the ecological integrity of marine protected areas, destroy commercial and recreational fisheries, and impede traditional cultural uses of coastal resources. The societal costs of biological invasions are staggering. In the United States alone, the costs to control aquatic invasive species are estimated in the hundreds of millions of dollars each year. As new invaders arrive and existing species spread, these costs will grow exponentially.

### International dimensions of bioinvasions

Although aquatic bioinvasions can originate from anywhere, the recent increase in trade and migration within North America raises the risk of expanded transboundary introductions of alien species among the neighboring NAFTA countries of Canada, Mexico and the United States. Consequently, this project is specifically designed to focus on transboundary pathways within North America. Clearly, many of the issues addressed here will be applicable to broader invasives problems as well.

Invasive alien species become established in coastal habitats through accidental and intentional introductions. Presently, one of the main pathways for invasion in North America is ship ballast water picked up in foreign ports and discharged as a living inoculum into local coastal waters, often with devastating effects on the native flora and fauna. For example, in San Francisco Bay, where very few native species still persist, a new invasive alien species becomes firmly established every 14 weeks as a result of ballast water discharge in the port. This risk may increase as new mega-ports are being planned along all three coasts. Other pathways of introduction in coastal waters include attempts to create a new fisheries by stocking alien species, careless dumping of unused live bait, release of unwanted aquarium animals, and accidental escape of captive animals or their diseases and parasites from aquaculture or research facilities. In most cases, the eventual migration of invasive species across international boundaries is merely a matter of time.

Unlike other forms of pollution that often remain localized, biological invaders rarely stay confined to their initial point of introduction, nor do they respect sovereign boundaries. Instead, aquatic invaders typically spread rapidly along prevailing coastal or river currents, with the species expanding its range hundreds or thousands of kilometers, often in a single reproductive cycle. To an invasive aquatic species, large multinational coastal ecosystems are effectively “borderless,” with few impediments to migration. Consequently, a single localized invasion in one country actually represents a significant international threat across North America, as do pathways that routinely move alien species from one country to another or from one drainage basin to another.

## Current capacity gaps

In spite of the potential international consequences of trans-boundary invasions, the majority of management efforts to prevent and control the spread of alien species have tended to focus nationally and rarely reach across the very political borders so easily traversed by the invaders themselves. Moreover, few existing educational efforts are multilingual or designed to reflect cultural differences among affected populations, and therefore miss a large segment of the relevant target audience. Perhaps more than any other environmental issue, invasive species require comprehensive and sustained international collaborations, such as that ongoing between the State of Washington and British Columbia on issues concerning invasives in the shared waters of the Puget Sound/Georgia Strait region, as well as the IJC.

## Progress to Date

On 28–30 March 2001, in Montreal, Quebec, the CEC convened the first North American workshop to identify cooperative opportunities on “Preventing the Introduction and Spread of Aquatic Invasive Species in North America.” This workshop primarily addressed intentional introductions, aquaculture and live bait, and benefited from the participation of experts and decision-makers from government agencies, industry, NGOs and academia.

From the results of this workshop the CEC recommends five priority areas for cooperation in North America on invasive species:

- Develop a North American Invasive Species Information Network and create a North American hub for the Global Invasive Species Information Network (GISP);
- Create a regional directory of legal and institutional frameworks relevant to the prevention and control of invasive species. This directory will cover both regulatory and voluntary measures (e.g., codes of conduct), and include a list of invasive species already regulated by one or more of the three countries;
- Identify invasive species and invasion pathways that are a concern of two or more countries and determine priorities for bi- or trilateral cooperation;
- Develop and distribute tools for raising awareness of the issue and empowering policy makers, environmental educators, science writers, resource managers, and other audiences to address it; and
- Identify tools to provide economic incentives to industries and other private stakeholders that voluntarily take actions to prevent the introduction and minimize the spread of invasive species.

## 2002

## Estimated Resources Required (C\$)

<p><b>Action 1:</b> Government and selected stakeholders will participate in a workshop on Invasive Species and will be asked to select one priority action from the list of five developed at the meeting. Action will be developed to implement the selected activity within a one-year time frame. Follow-through on recommendations identified at the Montreal Workshop</p> <p>Activity 1: Contact government and other key stakeholders to select the recommended action to be implemented by the CEC</p> <p>Activity 2: Organize a trilateral, multisectoral workshop of experts to advance the recommended priority</p> <p>Activity 3: Taking the results of the workshop into consideration, produce a report in support of the recommendation</p>	<p>60,000</p> <p>2,000</p> <p>28,000</p> <p>30,000</p>	
<p><b>Total Resources Required</b> 60,000</p>		

A trilateral approach to the prevention and control of invasive species could enable all three countries to make the issue a significant priority, develop mutually supportive legal and policy frameworks, share information and technical capacity, and use limited resources efficiently. Through trilateral cooperation, the region could address current problems and develop strategies to prevent new ones in a timelier manner.

During the year 2001, the *ad hoc* working group agreed on the first actions towards implementation, and the proceedings from the workshop were published in collaboration with NOAA.

### **Actions 2002 Overview**

Work will continue on the development of priority actions. The CEC will constitute an important forum for the Parties to identify priority species and coordinate responses, including supportive legal and policy frameworks for addressing invasive species.

### **Public Participation**

The public has and will have opportunities to participate in all aspects of the Aquatic Invasive Species project, from planning and attending the workshop, to implementation (via community-based conservation efforts), to dissemination of the results (via web-based programs).

### **Capacity Building**

The Aquatic Invasive Species project will build significant management capabilities in all three countries by leveraging the expertise and regional knowledge of the participants, and by developing multinational programs to prevent and control future bioinvasions. These capabilities will be readily transferable to future needs beyond the scope of this project (e.g., bioinvasions originating outside North America).

### **Expected Results**

The Aquatic Invasive Species project will produce a series of results based on the priorities identified in the workshop, ranging from reports outlining gaps in regional prevention and control capabilities, increased access to ecologically critical information, and, most importantly, reduced risks of future invasions by alien species. Information supporting and/or arising from this effort will be made available through the NABIN portal.

### **Expected Partners and/or Participants**

The Aquatic Invasive Species project will involve natural resource agencies, academics and the public in all three countries. The project complements many ongoing projects of the Aquatic Nuisance Species Task Force and its member agencies within the United States, and of the International Joint Commission (IJC). Preliminary discussions have been and will continue to be initiated among other potential partners, including IUCN.

### **Linkages to other CEC Projects**

Along with being an enabling tool for ecoregional conservation, the Aquatic Invasive Species project complements and supports the following ongoing CEC projects and programs:

- North American Biodiversity Information Network and, in particular, NABIN's collaborative initiative with the Inter-American Biodiversity Information Network (IABIN) on invasive species; and
- the Environment, Economy and Trade program.

### **Actions 2003**

*2003 Actions: To be determined*

## 2.1.7 North American Biodiversity Information Network

### Project Summary

The North American Biodiversity Information Network (NABIN) is a collaborative network that brings together primary data sources for those involved in the protection and conservation of biological diversity in North America. NABIN addresses the real need for a comprehensive biodiversity database that will improve planning and knowledge tools for conservation initiatives. The project accomplishes this by developing expertise and technology to collaborate in providing more effective information access throughout North America. NABIN also participates in an emerging worldwide biodiversity information network that is publicly accessible and free, by interconnecting other national and international initiatives, such as the Canadian Biodiversity Information Network (CBIN), the US National Biological Information Infrastructure (NBII), the *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* (Conabio), the Inter-American Biodiversity Information Network (IABIN) and the Convention on Biological Diversity Clearinghouse Mechanism (CHM).

The project also addresses issues related to the development of NABIN such as data standards and protocols for the exchange of information. The CEC will convene and facilitate discussions among key public and private institutions that collect, manage and use biodiversity data. NABIN is also developing applications dealing with invasive species. The link to this important initiative will contribute greatly to protecting the marine, aquatic and terrestrial ecosystems from the effects of one of the greatest threats facing North America's ecosystems.

NABIN fulfills the objectives of the CEC in addressing its information needs. Its development and implementation is a long-term project that will require ongoing input. Continued CEC stewardship through the year 2004 would ensure that the project maintains its trinational perspective and objectives. It will also contribute to the implementation of trinational strategies for public participation and environmental information dissemination.

### Goals and Objectives

The primary goal of the project is to assist institutions and agencies that collect, manage or use biodiversity data to collaborate on providing more effective access to that information across North America. Another goal is the use of NABIN as a support tool for all CEC programs that will benefit from the integration of environmental information.

These goals will be pursued through the following objectives:

- To continue the development of a North American Biodiversity Information Network, through the increasing participation of the distributed collaborative network of biodiversity information; expanding the user base; and directing users to new sources of data by including other taxa and observational and monitoring data;
- To promote the exchange of biodiversity data among private and public entities;
- To identify gaps in existing data and knowledge;
- To provide leadership in developing applications and information tools to national, regional and global biodiversity initiatives (NBII, IABIN, CHM, etc.);
- To increase visibility through an Internet portal that will be user-friendly, and an effective outreach and public education tool; the portal will raise interest and involvement from all levels of government, NGOs and the public;
- To develop examples of direct use of NABIN through case studies supporting other CEC program areas such as NABCI, invasive species threats, marine protected areas (Baja to Bering), and transboundary terrestrial priority regions and protected area networks such as Yellowstone to Yukon, and the Sierra Madre.

## Rationale

There is no comprehensive understanding at the North American level of what biodiversity data exist, where and how reliable they are, and how they may be accessed. Existing biodiversity data are scattered in various formats and only sometimes documented. Numerous initiatives by federal, state, provincial and nongovernmental agencies are underway to develop national and global environmental databases, including information on species and other natural resources, information management standards and different systems of taxonomic classification. NABIN seeks to identify the existence of data sets related to North America and the means to acquire access to them.

Accessible and accurate scientific information is necessary for good conservation management. Many environmental systems in North America transcend boundaries, and information about them needs to be shared. By sharing and accessing biodiversity data at the North America level, classification conflicts can be avoided and more coherent, cooperative actions are facilitated. It will also produce economies of scale and avoid duplication of efforts. Finally, a regional initiative will enable North America to provide leadership in global efforts to make biodiversity information better organized and more accessible.

### NABIN's Portal: A Link to North America's Biodiversity

Ecoregions, socioeconomic and political processes serve as a framework to assess North American biodiversity information. Access to species information within NABIN through Species Analyst and REMIB support the management actions in and around ecological areas of critical concern, such as protected areas, important bird areas, threatened habitats and susceptible areas for invasive species. The enhancement of NABIN's portal that will link tools and institutions with data among CEC programs will facilitate cooperation among communities that share similar concerns and will support environmental management in North America.

## Progress to Date

The project has developed tools that are now maturing to provide better access to biodiversity information and are now being tested in ongoing programs for birds, invasive species, grasslands and marine protected areas. Issues such as taxonomic concerns on data quality and standards for information about data sets (metadata), have also been identified. The number of institutions participating in data sharing has increased, and the development of conservation strategies using biodiversity information has contributed to the development of tools for data searching and related content information. The unification of Species Analyst and REMIB is under way and will provide users a more efficient and powerful information-gathering tool. With continued funding, it is expected that Species Analyst-REMIB will evolve as other internet tools become available. For example, geospatial applications will display data in map form, provide access to habitat information at ecoregion level, and will link data sets to North American and regional maps.

The North American Fund for Environmental Cooperation (NAFEC) helped to support the initial meeting for the launch of the Yellowstone to Yukon (Y2Y) initiative. Today, the Y2Y is becoming a North American model to respond to trans-boundary conservation issues. Being one of the 14 priority ecoregions in North America, it links directly into several programs within CEC and it offers an excellent framework to integrate biodiversity information into conservation programs. The Y2Y has a unique participation of federal, state/provincial and local governments, NGOs, and community leaders in the United States and Canada, that provides access to regional information in support of the NABCI and Grasslands programs. NABIN is connecting distributed databases within Y2Y in support of the NABCI regional program.



The question of intellectual property rights as they relate to the internet is being addressed through the revision and publication of the draft paper, "The State of Copyright Law and Its Impact on Distributed Environments in the NAFTA Countries." In this publication, the CEC will be given credit for advancing knowledge in this area, and all CEC programs can benefit from the information it contains. Specifically for the purposes of NABIN, a Memorandum of Understanding will also be produced to use when working with our partner institutions.

During the 2001 CEC council session, the Integrated Taxonomic Information System (ITIS) Initiative officially launched ITIS-North America. This was a major step in providing taxonomic information and common names in three languages. ITIS-NA links directly with Species Analyst and REMIB, therefore contributing to the network of institutions that can share information. The opportunities to enhance collaboration for observational data have been maturing too as Environment Canada's EMAN (Environmental Management and Assessment Network) continues to offer users access to their monitoring and assessment partners. NABIN has been working closely with the Invasive Species initiative to support opportunities for a coordinated action plan with the World Bank, the US Geological Survey (USGS) and IABIN. In 2001, focus was on aquatic invasive species as they were related to Marine protected areas, and to the grasslands initiative in North America. NABIN-related proposals have been promoted among academic institutions and nongovernmental organizations to further other tools and applications for the conservation of biodiversity. The NABIN Steering Committee and a biodiversity working group contributed to the development of a strategic vision for NABIN.

## **Actions 2002 Overview**

NABIN will focus on areas suggested by the strategic vision of the steering committee; it will link CEC programs to facilitate communication and public participation. NABIN actions in 2002–2004 will integrate relational data from CEC initiatives such as NABCI, SCCC, MPAs Network, Trade in Wildlife Species, and Sustainable Tourism to offer the support of NABIN tools for conservation in each ecoregion.

During 2002–2004, NABIN will continue to offer its knowledge and expertise to participants in IABIN, to optimize resources and projects of benefit to the North American region. NABIN will create its own web presence by developing a portal through which one can intuitively search and retrieve biodiversity information. NABIN technology will be used to interconnect aquatic and terrestrial databases within regional maps, and apply the results in support of other CEC initiatives, e.g., invasive species, transboundary terrestrial/marine protected areas, and NABCI. NABIN will focus its resources through case studies that support environmental research and decision-making.

Because NABIN users can access information on biodiversity in regions other than North America, an additional merit of the project is that it will be perceived as a key regional initiative supporting hemispheric and global initiatives. NABIN will continue the development of Species Analyst and REMIB, connecting observational and specimen-based data across government and nongovernmental institutions. NABIN will improve the means for public access to this tool through a more friendly graphic user interface in its portal and implementing capacity building activities to increase the institutional and individual participation.

## Public Participation

Public participation in the objectives of NABIN is ensured through the establishment of a web interface that links to CEC programs, documents and distributed databases of biodiversity information. Unrestricted and free access to biodiversity information further ensures public participation by offering the North American public the resources needed for research, policy making and community empowerment. Indeed, NABIN, through its emphasis on a holistic approach to data sharing and diffusion, gives the North American public the tools to analyze environmental issues directly affecting their communities within each ecoregion. Furthermore, partner institutions in NABIN will provide a framework for JPAC to have continuous access to biodiversity information and CEC program implementation at the ecoregional level.

## Capacity Building

NABIN links communities with independent information needs by interconnecting institutional resources and expertise. This unrestricted and free interconnection of biodiversity information offers North American communities and governments the means to better choose among policy options and modes of implementation. NABIN also offers a feasible model for other environmental data communities to integrate and share information. In summary, by giving interested stakeholders access to more complete information, NABIN ensures better tools to assist policy makers, enhanced environmental management, ability of all communities to participate in an environmental issues, increased collaboration and sharing of expertise, and an integrated framework for other environmental information projects and initiatives.

## 2002

## Estimated Resources Required (C\$)

<b>Action 1. Increase collaboration and participation in national and international biodiversity activities in North America</b>		<b>40,000</b>
Activity 1: Outreach to museums, government agencies, academic institutions and NGOs to increase sharing of data and the use of NABIN to increase knowledge-sharing with international initiatives (GBIF, IABIN, CHM, EMAN, WMC), and develop joint initiatives for North America	15,000	↓
Activity 2: Develop community-based case studies on applying biodiversity information at the ecoregion level to support ecosystem monitoring and management actions along CEC priorities	25,000	
<b>Action 2. Support the ongoing development of NABIN information management tools: integration of Species Analyst, REMIB, EMAN Canada. Priority should be given to the creation of a NABIN portal</b>		<b>90,000</b>
Activity 1: Strengthen the communication capability among NABIN institutions by developing visual resources included in NABIN's portal, on applications, support materials and examples featuring NABIN accomplishments, also allowing access to CEC databases	20,000	↓
Activity 2: Increase institutional consensus and data integration—Steering Committee meetings and follow up	20,000	
Activity 3: Unify REMIB and Species Analyst	10,000	
Activity 4: Develop a training workshop for key user groups in the use of NABIN's data search and modeling for biodiversity analysis	10,000	
Activity 5: Clarify intellectual property of Species Analyst and archive source code at NABIN office for free distribution. Identify and leverage opportunities to capture and use critical data which can be integrated for public access through the NABIN portal. Improve connection to ITIS, the CHM and other web tools	20,000	
Activity 6: Improve the map interface and access to Species Analyst/REMIB in supporting case study prototypes of Action 1	10,000	
<b>Total Resources Required</b>		<b>130,000</b>

## Expected Results

The project will offer national, regional and international groups informational management tools for access to databases and their metadata and procedures to deal with incomplete information and data sets residing on different platforms, issues of copyright and collaboration with other projects. In addition, the project will also offer a means to integrate diverse data, thereby giving users a portal for biodiversity information, CEC programs, and community interest groups in North America. And last, because of the collaborative emphasis of the project with other initiatives, it will foster greater sharing of expertise and information to support decision-making at different government levels.

In the year 2002, efforts will be directed toward developing a NABIN portal, applying NABIN in support of CEC priority programs and incorporating other taxa into the distributed query system. NABIN will offer:

- a single window portal which intuitively links Species Analyst generally with taxonomic tools such as ITIS and applies these in case studies which show NABIN's importance
- prototype tools for application to CEC priority programs, specifically invasive species and NABCI;
- an integrated,unrestricted perspective of North American species through use of these tools;
- documented source code so that tools can be replicated or advanced by agencies in the participating countries;
- metadata information and map display and analysis;
- interconnection to different types of data,institutions and individuals; and
- an analysis of the intellectual property rights for exchanging information within the context of the Americas.

## Expected Partners and/or Participants

In the development of the North American biodiversity information network,the project will work with national and international initiatives such as:

- University of Kansas,the University of Calgary, UNAM and other academic institutions and partners,
- Association of Biodiversity Information (ABI), the Miistakis Institute and other NGOs,
- Canadian Biodiversity Information Network (CBIN),
- Canadian Geospatial Data Infrastructure (CGDI) —Geoconnections
- Biodiversity Knowledge and Innovation Network (BKIN)
- Ecological Monitoring and Assessment Network (EMAN)
- National Biological Information Infrastructure (NBII),
- Federal Geographic Data Committee (FGDC)
- *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* (Conabio),
- *Instituto Nacional de Geografía Estadística e Informática* (INEGI)
- Yellowstone to Yukon Conservation Initiative (Y2Y),
- Baja to Bering Conservation Initiative (B2B)
- North American Bird Conservation Initiative (NABCI),
- Inter-American Biodiversity Information Network (IABIN), and
- other initiatives such as Species 2000,the Integrated Taxonomic Information System (ITIS),the Global Biodiversity Information Facility (GBIF), and the Clearing House Mechanism (CHM).

## Linkages to other CEC Projects

This project will continue to emphasize its support of CEC programs by integrating information for biodiversity conservation within North America. Therefore, NABIN will provide crucial feedback concerning the state of the environment in priority ecoregions that will aid in evaluating the effectiveness of conservation initiatives taking place.

The greatest challenge to the NABIN network initiative is to become relevant “on the ground.” Toward this end, future applications of NABIN will link to virtually all CEC projects by providing project-specific data correlation and integration for otherwise unrelated data sets. NABIN will work with NABCI, MPAs, Grasslands, and Aquatic Invasive Species to demonstrate how networked biodiversity information can be used.

Given the CEC’s mandate, NABIN will focus upon transboundary case studies, which link people across the US/Canada border and the US/Mexico border. The terrestrial Yellowstone to Yukon conservation initiative (Y2Y) is currently employing Species Analyst to catalogue data and apply them using customised map solutions which incorporate a framework of transboundary GIS datasets. Focusing on birds, Y2Y connects a network of people and habitat conservation.

This example will help demonstrate how NABIN can be linked closely with the protection of migratory bird habitat in North America. It will provide public access to extensive databases such as the existing museum data on bird collections, the Audubon Society “Bird Source” and the “Citizen Science” project from Cornell University that will support data on bird taxonomy and population information.

## Actions 2003 Overview

NABIN’s institutional participation will continue to support shared information for North America. Improved information access will facilitate management decisions at ecoregional and local levels. NABIN will continue its support of governments, CEC programs, academic institutions and public participation. The NABIN steering Committee will provide guidance toward the most effective impact of project implementation.

The CEC anticipates continued implementation of NABIN with guidance from its steering committee. Other data sets will complement the biodiversity information, as they become available in digital format. Better tools will be available to expand local government data access and participation.

## Actions 2003

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### Action 1: Continue NABIN Support to CEC programs

- Activity 1. Integration and testing of the NABIN portal
- Activity 2. Support the development of an ecoregional indicators strategy
- Activity 3. Implement Public access and feedback at community level

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### Action 2. Continue collaboration and participation in biodiversity activities in North America

- Activity 1: Strengthen knowledge-sharing with International Initiatives
- Activity 2: Develop a community-based application for observational data with support to NABCI and Marine Protected Areas
- Activity 3: Develop a case study on biodiversity indicators at the ecoregion level using NABIN framework, to support ecosystem monitoring and management actions
- Activity 4: Link NABIN information management tools to ongoing global climate change initiatives

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### Action 3. Promote the use of NABIN information management tools

- Activity 1: Increase institutional Participation
- Activity 2: Expand data sets access and integration
- Activity 3: Enhance CEC data and communication tools (2004)

## **POLLUTANTS AND HEALTH**

The mission of the Pollutants and Health program area is to establish cooperative initiatives on a North American scale to prevent or correct the adverse effects of pollution on human and ecosystem health. Guidance on methods to accomplish this mission is embodied within the language of NAAEC Article 10. These methods include: encouraging technical cooperation between the Parties; promoting pollution prevention techniques and strategies; recommending appropriate limits for specific pollutants, taking into account differences in ecosystems; recommending approaches for the comparability of techniques and methodologies for data gathering and analysis, data management, and electronic data communications; and promoting access to publicly available information concerning the environment that is held by public authorities of each Party.

This program area aims to pursue the following objectives:

- facilitating coordination and cooperation between the three countries on protection of the environment;
- enhancing comparability and compatibility between the three environmental protection systems;
- improving the knowledge base on issues of environmental pollution;
- developing technical and strategic tools to avoid, eliminate, reduce, or manage environmental pollutants; and
- improving the scientific, technical, and strategic capabilities of North American environmental protection agencies.

The activities planned and described in this document are the result of a coordinated effort between the five programs to maximize their combined benefit. These activities have also been designed to coordinate with and enhance the efforts of other North American environmental protection entities.

## **Program Initiatives**

Five programs and their subsidiary projects specifically address the protection of human and ecosystem health.

### **Cooperation on North American Air Quality Issues**

- Facilitating Trilateral Coordination in Air Quality Management
- Developing Technical and Strategic Tools for Improved Air Quality in North America
- Trilateral Air Quality Improvement Initiative: North American Trade and Transportation Corridors

### **Sound Management of Chemicals**

- Sound Management of Chemicals

### **North American Pollutant Release and Transfer Register**

- North American Pollutant Release and Transfer Register

### **Pollution Prevention**

- Capacity Building for Pollution Prevention

### **Children's Health and the Environment in North America**

- Children's Health and the Environment in North America

### 3.1.1 Facilitating Trilateral Coordination in Air Quality Management

#### Project Summary

This project focuses on improving communications and interactions among the air quality management agencies of North America, establishing improved mechanisms for exchanging technical data, and developing strategies to address air quality issues of common concern. The project has three main action areas for 2002:

- Convene a North American air quality meeting
- Support the development of an association of Mexican air quality professionals
- Facilitate exchange opportunities for air quality professionals in North America

#### Goals and Objectives

The goal of this project is to improve both the exchange of technical information and the level of cooperation/coordination in air quality improvement activities between the air quality management agencies of the three countries.

The objectives include:

- fostering a greater awareness and understanding of the air quality management systems in North America;
- promoting compatibility in approaches to air quality management;
- establishing a regular exchange of technical information and air quality improvement strategies among North American air quality management officials; and
- improving the overall capacity of air quality management.

#### Rationale

The development of North American strategies to reduce the long-range transport of pollution through the atmosphere can best be accomplished through cooperative partnerships among air quality management agencies and experts. Increased knowledge and understanding of the priorities and programs of the various air agencies in North

America are keys for increased cooperation on a North American level. Greater exchange of information will lead to improved air quality management in North America and, at the same time, maximize resources and avoid duplicating efforts of other institutions.

#### Progress to Date

In 2001, the CEC sponsored two meetings of North American air quality experts to discuss air emission inventory issues. The first meeting was held in Montreal during November 2001. Air officials from all three countries identified key areas where the CEC can facilitate increased comparability, quality, and public availability of air emissions inventory information in each country. The second meeting was held in conjunction with the PRTR Consultative Group meeting in Montreal during December 2001. This meeting provided information to the public on the current status of air emission inventories in North America, and solicited public comment on key informational needs.

During 2001, the CEC entered into a cooperative agreement with the *Fundación México-Estados Unidos para la Ciencia* to support the creation of a network of Mexican air quality professionals. The purpose of this action was to create and support trilateral cooperation in the sound management of air quality in North America by establishing a Mexican network as a focal point for cooperation with networks in Canada and the United States. The network in Mexico builds upon the experience of a Mexico-US binational group formed under the leadership of Luisa Molina and the Mexican Nobel laureate Professor Mario Molina. The Mexico network will bring together government agencies, industry, nonprofit public interest groups, academic institutions and others with knowledge and experience on air quality issues in Mexico. The first meetings of the new network have been held to discuss the current situation of air quality in Mexico City, and evaluate air pollution research projects funded by the *Fundación* and the *Consejo Nacional de Ciencia y Tecnología* (Conacyt).

The CEC air program also facilitated the exchange of information and experiences among air quality professionals in North America by contributing support to several North American air quality meetings. These meetings included a climate change workshop of the Conference of the New England Governors and the Eastern Canadian Premiers, an Environment Canada workshop on air quality forecasting and applications with participation from Mexico and the United States, and a symposium at the Massachusetts Institute of Technology on regional and global transport of air pollution.

### **Actions 2002 Overview**

Actions in the three basic components of this project can be broken down as follows:

#### **North American Air Quality Meeting**

In 2002, the CEC air program will convene a trilateral meeting on air quality issues in North America. The CEC will seek input on the major areas of concern regarding air quality in the North American context. Through consultation with an *ad hoc* steering committee of air quality officials in the three countries, the CEC will develop a meeting agenda identifying key air issues in the three North American countries where the CEC can play a role by facilitating trilateral cooperation. The meeting will be open to the public and include representatives from government, business, environment and public health groups, and other interested participants. The air program in consultation with the *ad hoc* government committee will develop background materials and other relevant documents in advance of the meeting to support discussion on the agenda topics. The CEC will use feedback from the air quality meeting to provide Council with a recommendation for future priorities for the air program, as it continues to evolve in response to government and public needs.

#### **Development of an Association of Mexican Air Quality Professionals**

As the result of recommendations from the inaugural meeting of North American air pollution management officials in Asheville, NC in April 2000 in conjunction with the spring meeting of the State and Territorial Air Pollution Program Administrators/Area and Local Air Pollution Control Officials (STAPPA/ALAPCO), the CEC air program initiated an effort in 2001 to create an association of air quality professionals in Mexico. By leveraging on current initiatives at the *Fundación México-Estados Unidos para la Ciencia* (Fumec), the CEC is facilitating cooperation, coordination, and collaboration between air officials and others in the three countries.

In 2002, the CEC will continue support for this effort at Fumec by assisting in further activities to develop institutional capacity in Mexico through air quality professional exchanges, training, and the collection of more complete air quality information. The Mexico association will undertake a number of activities during 2002, including:

- Support the organization of the Fifth Workshop of the Mexico City Air Quality Project coordinated by Nobel laureate Dr. Mario Molina, to be held in the State of Mexico in January 2002.
- Organize a Network Trilateral Constitutive Meeting in the US-Mexico border region, specifically in Ciudad Juárez in March 2002.
- Organize a short training workshop on Air Pollution Research and Management in Ciudad Juárez in March 2002.
- Publish the first and second Newsletter on Air Quality at the beginning and at the end of 2002.
- Advise the air quality team of the State of Chihuahua on research and management.
- Carry out a series of seminars on different aspects of air pollution in Mexico every two months.
- Organize a series of meetings to discuss with different stakeholders the various aspects and implications of the new government air pollution program called Proaire II.



**Exchange Opportunities for Air Quality Professionals in North America**

This exchange program, begun in 1999, provides opportunities for technical and planning staff to meet with their counterparts from the other North American countries. These exchange opportunities allow the exchange of knowledge to occur on specific issues of importance to each country. Ambient air monitoring, impact and back-trajectory modeling, inventorying of emissions and diesel smoke testing programs are examples of such issues of importance. This program will improve the overall capacity of air quality management within North America through the exchange of technical and strategic knowledge between the staffs of the three countries. It will also improve opportunities for intra-continental coordination as a result of a greater understanding of the techniques employed by each country, and increased familiarity among staff members.

The exchange program provides travel support to air quality officials for meetings that satisfy established criteria, subject to available funding. These criteria include:

- The exchange is on a North American transboundary air issue, or on an air issue of common concern to all three North American countries.
- The exchange is held at a location in one of the three North American countries.
- The applicant is a government official with responsibilities for air quality and the exchange is within the applicant's expertise and responsibilities.
- The exchange covers issues that overlap with the CEC air program activities.
- The applicant has no other realistic opportunities for travel support.
- No more than two officials (including the applicant) from the applicant's office are attending the exchange.
- The travel support will comply with ethical guidelines established by the applicant's agency.

**2002**

**Estimated Resources Required (C\$)**

Action 1: North American Air Quality meeting including background paper(s) and related preparatory work	100,000	↓
Activity 1: Establish <i>ad hoc</i> government committee and develop agenda	10,000	
Activity 2: Develop background materials in support of agenda topics	25,000	
Activity 3: Develop and distribute outreach materials in advance of meeting	25,000	
Activity 4: Provide travel support for meeting	15,000	
Activity 5: Meeting facilities, support staff, and translation	25,000	
Action 2: Association of Mexican Air Quality Professionals	50,000	
Action 3: Exchange opportunities for air quality professionals in North America.	30,000	
The exchange program provides travel support to air quality officials for meetings that satisfy established criteria and is subject to available funding.		↓
	<b>Total Resources Required</b>	<b>180,000</b>

## Public Participation

The North American air quality meeting will be a key opportunity for public input into the future direction of the CEC air quality program. The association of Mexico air quality professionals also provides a new institutional forum encompassing interested participants, but from all relevant sectors having expertise in air quality issues affecting Mexico as well as the rest of North America.

## Capacity Building

Greater exchange of information and experience among air quality officials will increase the overall quality, availability and accessibility of air quality data within North America. This will greatly expand the present capacity for cooperative air quality management throughout the North American region. The work with Fumec on the Mexico air professional's network provides an institutional framework for interacting with participants in similar organizations across North America.

## Expected Results

The CEC will use feedback from the North American air quality meeting in setting future priorities and providing advice to Council as the air program continues to evolve in response to government and public needs. The expected results and measures of success for the Mexican Air Quality Professionals Association will be the successful completion of the project activities listed above. The workshop summaries, broad involvement of air quality professionals in the

training seminars, and the proactive engagement of a variety of stakeholders within the network will be keys to determining the success of this project. Ultimately, the true success of this effort will be gauged by the extent of involvement the network is able to garner from air quality experts in Mexico, as determined by their participation and work efforts during the network's meetings and workshops. The CEC expects the exchange opportunities for air quality professionals to improve the level of understanding and interaction among North American air programs. This will result in improved interagency communications and interactions, better mechanisms to readily exchange technical data among themselves, and greater opportunities to cooperatively develop strategies to address air quality issues of common concern.

## Expected Partners and/or Participants

Environment Canada, provincial and local air pollution control agencies, Semarnat, Mexican state and municipal air pollution control agencies, *Fundación México-Estados Unidos para la Ciencia*, the General Directorate of Environmental Health in Mexico's Ministry of Health, US EPA, State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO), industry, environmental and public health groups.

## Linkages to other CEC Projects

Information shared through exchange and networking activities among air quality professionals in all three countries can overlap with pollution prevention and information access activities within the SMOC and PRTR projects.

## Actions 2003-2004

### 2003

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Action 1: Exchange opportunities for air quality professionals in North America  
Other actions to be determined

### 2004

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Action 1: Exchange opportunities for air quality professionals in North America  
Other actions to be determined

### 3.1.2 Developing Technical and Strategic Tools for Improved Air Quality in North America

#### Project Summary

This project is aimed at stimulating the development of tools needed for achieving and maintaining healthful air quality in North America. In addition to the development of innovative tools and programs, it will provide feedback on pollutant reduction strategies as well as highlight best practices.

#### Goals and Objectives

The goal of this project is to stimulate the development of technical tools that have trinational applicability to planning and pollution reduction programs in North America. The central focus of the project in 2002 is to facilitate the development of trinational air contaminant and greenhouse gas emissions inventories. This entails gathering, compiling, and sharing high quality environmental information among the three countries. The meetings of 15 November 2001 and 13 December 2001, between inventory experts and stakeholders are the initial discussions among parties in the three countries on inventory issues of mutual concern. These meetings are assisting the CEC in identifying the project's objectives through the input of the participants and other interested commentators. Under this project, the CEC also will facilitate developing a public electronic clearinghouse of information about best available technologies for air pollution control. In 2002, this effort will be limited to organizing a meeting of representatives of the three countries to define the scope and functions of the clearinghouse.

#### Rationale

As a medium, air generates environmental action across the borders of the three North American nations. Timely and accurate environmental information is essential for rational decision making and the development of sound environmental policies. Strengthening the NAFTA partners' capacity to acquire and share knowledge among all sectors of society is fundamental to the ability of citizens to take informed actions.

Credible and accurate information is crucial to addressing pollution problems within transboundary airsheds. In order to facilitate effective cooperative efforts, air quality planners need reliable information on the characteristics and dynamics

of transboundary airsheds, interaction between airsheds, and the movement of pollutants emitted into the environment through the atmosphere. Promoting effective tools and strategies to address specific pollutants can help jurisdictions in North America advance on improving air quality.

In 1996, the Council of the CEC agreed to promote the collection and exchange of appropriate data, and the development and application of suitable models for the range of chemical substances of concern as defined by the CEC (Council Resolution 96-05). Building upon this initial resolution, the CEC Council adopted Council Resolution 01-05 on 29 June 2001, for "Promoting Comparability of Air Emissions Inventories" in North America. The Council recognized a need for air emissions information to support regional transboundary air quality planning activities, and that the CEC could assist in addressing this need by building upon its experience with pollutant release and transfer register reporting in North America. The CEC will be assessing reporting comparability in the three NAFTA countries for a number of key air pollutants, including sulfur dioxide, nitrogen oxides, volatile organic compounds, particulate aerosols, and greenhouse gases.

#### Progress to Date

During 2001, the CEC air program collaborated with the Sound Management of Chemicals program to develop a national mercury air emissions inventory in Mexico. This work will be combined with national inventories in Canada and the United States to give, for the first time, a continental perspective of source regions for mercury air emissions in North America. At the end of 2001, the CEC air program held initial meetings on the development of trinational air emissions inventories with technical staff from government agencies in each of the three countries. The meeting participants began defining the issues of data comparability and information access needed for regional cross border air quality planning efforts. Following the government meeting, the CEC held a meeting in tandem with the PRTR Consultative Group to obtain public input into the new air emissions inventories project. The participants also provided advice to the CEC on the reasonable scope of information that can be assessed during the 2002 time period.

Also in 2001, the CEC air program initiated an effort with the *Instituto Nacional de Salud Pública* in Cuernavaca, Morelos, México, to assess air pollution impacts on the health of children and other sensitive population groups. The initial step in this effort was a pilot project to look at linkages between public health databases and ambient air monitoring information at a major border crossing between Ciudad Juárez, Chihuahua, and El Paso, Texas. In recognition of the linkage between population exposures and air pollution along trade and transportation corridors, this activity has been moved to the Trade and Transportation Corridors project (3.1.3) in the 2002–2004 workplan.

### Actions 2002 Overview

#### North American Air Emissions and Greenhouse Gas Inventories

With the adoption of CEC Council Resolution 01-05 on air emissions inventories, the CEC air program will be assessing the comparability and accessibility of air emissions information, including greenhouse gases, in the three member countries. The CEC will be working with a project team composed of the inventory experts in each of the three countries in carrying out the tasks of the new resolution. This project will also solicit public input through joint meetings with the regularly scheduled PRTR Consultative Group meetings.

In accordance with Council Resolution 01-05, the CEC will initially focus on sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds, particulate aerosols, and greenhouse gases. The CEC will assess progress in enhancing the comparability of North American air emissions inventories, with a goal of improving the comparability of definitions and nomenclature, the scope and resolution of shared inventories, emissions estimation techniques, the treatment of confidential business information, database structures, and reporting formats. The CEC project team will develop recommendations to improve access to, and understanding of, air emissions data. This initiative will work with ongoing activities by other national and international bodies pursuing similar objectives.

#### Information Clearinghouse for Best Available Technology for Air Pollution Control

As the development of a shared air emissions and greenhouse gas inventory gets underway, the CEC will begin to work with experts from the three countries to define the scope and functions of an electronic clearinghouse for information about best available technology for air pollution control. The CEC will convene a meeting to consult with experts from the three countries about the types of information that are available in the three countries, the types of information that are needed, and the most efficient methods for making the information available electronically.

## 2002

## Estimated Resources Required (C\$)

<b>Action 1: North American air emissions and greenhouse gas inventories</b>	<b>245,000</b>	
Activity 1: Convene regular meeting(s) of government inventory experts	55,000	↓
Activity 2: Convene annual public meeting on air emission inventories in collaboration with PRTR Consultative Group annual meeting	35,000	
Activity 3: Compile and review data and develop inventories report	105,000	
Activity 4: Translation, publication, and distribution of report	50,000	
<b>Action 2: Information Clearinghouse for Best Available Technology for Air Pollution Control</b>	<b>35,000</b>	
Activity 1: Convene a meeting of national representatives to define the scope and function of the clearinghouse	35,000	↓
<b>Total Resources Required</b>		<b>280,000</b>

## Public Participation

All reports developed through efforts supported by the CEC will be made available to the public. As the technical bases develop through the described activities, the CEC will be soliciting public input to identify and assess emissions inventory reporting and accessibility issues.

## Capacity Building

This project will help develop capacity among air quality managers in improving ways to address transboundary air pollution through the development of comparable emissions information about emissions and emissions control technology. A basic understanding of pollution sources and the amount of pollution they emit will be fundamental to assessing source regions of transported pollutants across borders into downwind receptor regions. By convening a group of inventory experts, the CEC can facilitate the exchange of standard methodologies used to estimate pollution from different source types, identify the best available control technologies for new and existing sources, and improve understanding of and access to the emission databases within each country.

## Expected Results

The project will assist governments and the public in sharing and understanding air emissions and greenhouse gas inventories and air pollution control technology on a comparable

basis in North America. It will build upon previous PRTR reporting experiences at the CEC to develop trinational reports for air emissions and greenhouse gas inventories. The reports will be separate from the PRTR *Taking Stock* reports, with the format determined by advice received from the inventory experts and other stakeholders.

## Expected Partners and/or Participants

Environment Canada, Semarnat, and the US EPA, along with provincial, state and local air quality agencies with expertise in air emissions inventories and air pollution control technology. Industry, environment, and public health groups will also assist in this effort.

## Linkages to other CEC Projects

This action is strongly linked to ongoing work with the Pollutant Release and Transfer Register project. Because many of the potential participants in the air emissions inventory work will also have mutual interests in the PRTR work, the two initiatives plan to hold an annual meeting in tandem in order to reduce travel and other costs for interested stakeholders. Emissions information from the electricity generation sector collected through this activity will support the Article 13 Electricity and Environment Initiative. Technical expertise on inventories brought together within this action will also assist the work of the Sound Management of Chemicals activity.

## Actions 2003–2004

### 2003

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Action 1: North American air emissions and greenhouse gas inventories

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Action 2: Information clearinghouse for best available technology for air pollution control

### 2004

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Action 1: North American air emissions and greenhouse gas inventories

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Action 2: Information clearinghouse for best available technology for air pollution control

### 3.1.3 Trilateral Air Quality Improvement Initiative: North American Trade and Transportation Corridors

#### Project Summary

This project seeks to address significant air quality issues associated with transport along North American trade corridors. Such issues affect all three countries of North America. Included in this project is an action to assess population exposure, including that of children, to vehicle emissions at selected congested trade corridor border crossings.

#### Goals and Objectives

The goal for this initiative is to continue studies of environmental dimensions of freight traffic in North America with the focus on the reduction of vehicle emissions through improved management practices, technologies and infrastructure.

The near-term objectives of this initiative are as follows:

- Pursue the development of inspection protocols designed to facilitate cooperation on the near-term reduction of transport-related diesel emissions.
- Identify key areas of concern regarding population exposure to air pollutants from vehicle emissions at selected congested border crossing points.

#### Rationale

The North American Trade and Transportation Corridors project is designed to promote mutually beneficial, “win-win” opportunities to advance environmental improvements as well as transportation advancements along trade corridors in North America.

Trade is booming in North America. As regional commerce accelerates, so too does the flow of goods and services pulsing through North American trade arteries—on land, by air and over water. The network that supports our increasingly integrated commercial transactions constitutes a complex and interrelated infrastructure including highways, airways, waterways, transmission lines and cables, and gas and oil pipelines, to name a few. The flow of goods, services and information through the North American system is influenced, and often

constrained, by a host of physical and administrative factors. Cars and trucks idle for hours at borders as custom officials inspect their contents, ground traffic is slowed by inefficient routing or other bottlenecks, and direct rail routes are increasingly difficult to find.

While, in many cases, other factors, such as local trade patterns, demographic growth or suburban sprawl, may explain stresses on infrastructure, recent studies do identify significant increases in North American trade generally and, in particular, heavy truck travel along the principal routes for inter-American trade. Highways constitute the dominant mode of transportation for North American trade, carrying 80 percent of US exports to Canada and 60 percent of Canadian exports to the United States. US-Mexican and Canadian-Mexican trade reflects similar percentages. Over 70 percent of US-Canadian trade (by value) moves by trucks, which also account for most of the trade with Mexico as well. Data indicate that truck traffic has increased substantially in the past decade, a trend that is forecast to continue in the future.

Inherent in all trade corridor proposals are environmental dimensions, some with transboundary or North American significance. Trade corridor initiatives can lead to enhanced cooperation to maximize both environmental and trade/transport benefits.

Truck traffic can have a significant impact on public health and the environment in many regions of North America. For example, according to estimates in the northeastern United States, heavy-duty diesel emissions comprise 33 percent of all nitrogen oxides and 80 percent of all particulate emissions from mobile sources. Nitrogen oxides are ozone precursors and contribute to the formation of smog that causes lung scarring and aggravates lung disease. The US EPA has labeled diesel particulates as a likely human carcinogen and the California Air Resources Board considers diesel particulates a toxic air contaminant. In addition, diesel exhaust contains 40 known carcinogens, including benzene, 1,3-butadiene, formaldehyde, and acrolein.

The contribution from diesel to the nitrogen oxides, particulates, and toxic chemical inventories is rising relative to other sources. Several factors contribute to this trend of increasing diesel pollution. First, the use of diesel fuel to power the continent's fleets of buses and trucks is becoming more pervasive due to the durability of these engines and the low cost of diesel fuel. Second, the growth in truck and bus fleets continent-wide continues to increase steadily. Third, the average age of the existing heavy-duty diesels is increasing due to the durability of the engines. For example, diesel engines are now being manufactured that can be driven one million miles before the original engine must be rebuilt.

Older engines pollute at a much higher rate than new engines, due to engine deterioration and less stringent emission levels in older model-year engines. Thus, targeting emissions from older diesel engines as well as reducing emissions from new engines is essential to reducing the pollution from the continent's diesel fleets in the near term.

In this dynamic context, the CEC can make an important contribution by bringing together diverse representatives from the public and private sector to share information on best practices and to stimulate collaborative endeavors.

### **Progress to Date**

In 2000, the CEC sponsored a discussion paper by ICF Consulting to look at potential environmental impacts from increased trade along five corridor segments in North America—two crossing the Mexico-US border and three crossing the Canada-US border. This effort also formed a stakeholders advisory group, (government and non-government representatives from each country) to help identify likely environmental impacts (with special emphasis on air quality) of North American trade and transportation corridor development, and describe opportunities for the prevention or mitigation of these.

The work by ICF led to a public presentation of the discussion paper at a CEC-sponsored workshop in Winnipeg, Manitoba, on 15 March 2001. Comments received at the meeting and during a six-week comment period that followed led to revisions of the discussion paper, which ICF completed in fall 2001.

The CEC received a number of excellent comments regarding potential areas of future work in this area, including advice submitted by the CEC Joint Public Advisory Committee (JPAC Advice to Council 01-01) along with submissions from interested stakeholders that included public interest groups, the railroad industry, and government agencies. While the number of potential opportunities identified by the public submissions exceeded the available CEC resources to fully pursue, the CEC was able to identify two areas for further work in 2001 and 2002 within the constraints of the air program budget. The first area is working towards greater consistency among various jurisdictions in inspecting and identifying malfunctioning and heavily polluting trucks along trade corridors. A second area is a public health assessment of sensitive populations' exposures to air pollution at a congested trade corridor border crossing.

Public comments at the Winnipeg workshop suggested that the future role for the CEC in corridor issues could be in encouraging greater comparability of standards, and that the CEC should continue to play a catalytic role in providing exchanges of information and best practices, and in enabling the dialogue that is essential for groups and interested parties to deal with corridor environmental issues. Also mentioned by JPAC was a desire to review experience gained from existing programs in order to assess the compatibility of different initiatives in the various corridors and expand current programs where appropriate. One such initiative specifically mentioned by JPAC was work done by the Northeast States for Coordinated Air Use Management (NESCAUM). In light of these comments, the CEC entered into an agreement with NESCAUM during 2001 to bring together key stakeholders to develop a common understanding and mutual recognition of key principals for identifying and remediating excess pollution from malfunctioning heavy duty trucks travelling along trade corridors. This initiative will hold a workshop in early

2002 to bring together experts and stakeholders from across North America who will share experiences from the various inspection programs, and identify areas of cooperation, opportunities for expansion, and potential mutual recognition across borders for the common elements of these programs.

A second area identified by participants at the Winnipeg workshop and in advice from JPAC concerns exposure to pollutants from traffic along congested corridor border crossings. Representatives from Mexico expressed particular concern about the need for air pollution exposure assessments for sensitive populations living near trade corridors. Such studies are fundamental for the development of risk assessments and risk management plans within trade corridors that are recommended in the JPAC Advice to Council 01-01. To this end, the CEC initiated a pilot study with the *Instituto Nacional de Salud Pública* in Cuernavaca to assess children's and other sensitive populations' exposure to air pollution near a congested trade corridor border crossing. The study is taking place in Ciudad Juárez, Chihuahua, Mexico, which is directly across the border from the US city of El Paso, Texas. A key element of the study is to develop and apply a common methodology that is compatible with exposure assessments performed elsewhere in North America, and potentially extend the methodology to other large Mexican cities along heavily traveled trade corridors.

### **Actions 2002 Overview**

The CEC air program has identified two activities for 2002 based on JPAC and public comments and advice submitted to the CEC as a result of the ICF discussion paper and Winnipeg meeting. The first activity is to work with government agencies and interested stakeholders on developing protocols to help reduce diesel emissions from heavy-duty trucks at border crossings. The second is to examine for public health implications (including children and other vulnerable populations) from exposure to air pollution from vehicle emissions at congested border crossings, with an emphasis on exposure to diesel exhaust.

### **Trinational protocol to reduce diesel emissions at congested border crossings**

In an effort to address public concern over excess diesel smoke (particulate matter), the CEC will be continuing work begun in 2001 to reduce emissions from heavy-duty trucks in North American trade and transport corridors. The CEC will support a stakeholder group involved in a dialogue about developing North American protocols for expanding and harmonizing current smoke inspection efforts. The CEC will sponsor a continuing set of workshops to a) educate stakeholders about existing programs; b) examine the feasibility of expanding current programs to areas not currently testing heavy-duty diesel trucks; c) explore issues related to smoke testing such as congestion at border crossings; and (d) extend pilot smoke testing projects to new border locations in NAFTA corridors.

This initiative will build on successful state and provincial initiatives to reduce diesel emissions from heavy-duty trucks through smoke testing programs. It will also build on EPA's efforts to harmonize state smoke inspection programs, and CEC's work to characterize the emissions increases associated with trade-related truck traffic. A group composed of stakeholders from federal and state governments, trucking associations, public health and environmental groups, and others will be advisors to this initiative.

### **Public health assessment of exposure to vehicle emissions at congested border crossings**

This action will focus on children's and other population groups' exposure to air pollution along major trade arteries associated with congested border crossings, with an emphasis on exposure to diesel exhaust. The work will build upon a pilot project in Ciudad Juárez-El Paso by researchers at the *Instituto Nacional de Salud Pública* (INSP) that is developing and implementing methodologies for investigating linkages between public health databases and ambient air monitoring information collected in the vicinity of congested border crossings. The initiative will also pilot similar assessment work to examine relationships between respiratory illness and transport emissions at a major trade artery



linked to a US-Canadian border crossing. This will help provide decision makers with estimates of the health impacts of air pollution on children and other sensitive populations along congested trade corridors, including an accounting for vulnerability linked to poorer living conditions. It is also in keeping with recent Joint Public Advisory Committee advice to the CEC to develop partnerships and conduct trade/transport pilot projects in border regions.

Ciudad Juárez, as one of the main crossing points along the Mexico-US border, has experienced an accelerated population growth leading to severe environmental health problems. Researchers estimate that in Ciudad Juárez, circulating vehicle emissions constitute 88 percent of the total pollutants released to the atmosphere, a fact that is important to consider in a city where much of the vehicle traffic is related to bridge crossings along the border. There is a lack of information in terms of the health effects resulting from exposure to air pollution attributed to border traffic and vehicle diesel emissions in these corridors. However, the positive association between environmental particle matter and ozone concentrations with the number of emergency room visits for exacerbation of childhood asthma even at concentrations below US and Mexican health standards supports the need for further research of susceptible populations. The main crossing bridges and their primary access roads offer a distinct possibility to assess the health effects of susceptible populations residing at varying distances from these large primary roads and diesel emissions corridors.

Initial work by INSP in 2001 developed methodologies for acquiring and assessing public health and ambient air monitoring data in the context of air pollution exposure. The work in 2002 will extend this work by developing common methodology to assess population exposures to the diesel exhaust component of the ambient air pollution along congested NAFTA trade corridors. The CEC will support work to test three hypotheses concerning diesel exhaust exposure along congested trade routes and border crossings:

- Exposure to diesel exhaust at environmental concentrations is associated with increased respiratory events and inflammatory and allergic reactions in asthmatic children or other sensitive subpopulations.
- The association of diesel exposure with health outcomes is stronger in asthmatic children than in healthy children.
- Diesel exhaust particles are more strongly associated with respiratory health outcomes than with particles emitted by gasoline vehicles.

This CEC initiative will help establish a common methodology for estimating population exposures to diesel exhaust along heavily traveled trade corridors and determine the impact of diesel exhaust and other particulates on the severity of asthma, allergies, and respiratory health among susceptible and healthy children or other sensitive subpopulations residing along congested NAFTA trade corridors.

This initiative will lay the foundation for comparing air pollution exposure assessments in Mexico to comparable work performed in Canada and the United States, and extend for the first time the methodologies to other Mexican cities outside of Mexico City. Ciudad Juárez is the pilot study for developing common methods for acquiring and assessing public health and ambient air quality monitoring data. It will be extended by further developing a common methodology for a focused assessment of the public health impacts from diesel exhaust exposure along major NAFTA trade corridors. There will be two separate assessments for diesel exhaust exposure, one along a congested corridor crossing the Mexico/US border and one along a Canada/US trade corridor. The two studies will use a common methodology for estimating diesel exhaust exposures to aid an intercomparison of the results. The investigators in each study will submit reports to the CEC with the results of the assessments.

A future goal is to attempt to discern differences and similarities in public health responses to urban air pollution mixtures in different cities across North America by developing a toolbox of common methodologies applicable across North America. This will facilitate intercomparisons of the results across a number of different locations and help decision-makers identify particular components within a given urban air pollution mixture that may call for different pollution control strategies relative to other North American cities.

## Public Participation

The workshops will include representatives of government agencies responsible for implementing truck testing programs, as well as representatives of the trucking industry and other interested members of the public.

## Capacity Building

The diesel smoke testing protocol development will build capacity to evaluate region-wide environmental impacts and policy options beyond local, state, provincial or federal jurisdictional boundaries. It will bring together experts and stakeholders from across North America who will share experiences from the various inspection programs to gain knowledge on what works best in these programs. It will

also explore opportunities for developing the capacity of new regions to implement similar programs, and investigate the possibility of achieving mutual recognition of common elements in the programs across different jurisdictions.

The public health assessment will bring together members of the public health research community with air quality planners in addressing air pollution impacts associated with congested border crossings. It will develop a general methodology that can be used by researchers when performing comparable studies elsewhere in North America. It will develop capabilities for air quality and public health experts to acquire and manage ambient air monitoring and public health databases for use in air pollution exposure studies.

## 2002

## Estimated Resources Required (C\$)

<b>Action 1: Support a workshop to further the development of North American protocols for expanding and harmonizing current smoke inspection efforts. The workshop objectives will be:</b>	45,000
<ul style="list-style-type: none"> <li>• Educate stakeholders about existing programs</li> <li>• Examine the feasibility of expanding current programs to areas not currently testing heavy-duty diesel trucks</li> <li>• Explore issues related to smoke testing such as congestion at border crossings</li> <li>• Extend pilot smoke testing projects to new border locations in NAFTA corridors</li> </ul>	
<b>Action 2: Develop and employ methodologies using public health databases, personal monitors, and ambient air monitoring to assess population exposures to vehicle emissions at selected congested border crossings, with an emphasis on diesel exhaust</b>	150,000
<b>Activity 1: Extend work in Ciudad Juárez to focus on diesel exhaust exposure along a busy trade artery that includes the following objectives:</b>	75,000
<ul style="list-style-type: none"> <li>• Develop a standard methodology to assess diesel exhaust exposure of children in Mexico living along a congested trade route crossing the Mexico/US border, based on information on traffic counts, distance to main roads, and air pollution levels, coupled with personal exposure estimates and other variables</li> <li>• Determine the content of diesel exhaust in particulates in the corridor</li> <li>• Determine if particulate composition has an effect on health outcomes</li> </ul>	
<b>Activity 2: Conduct diesel exhaust exposure study along a major trade artery associated with a Canada/US border crossing using comparable methodology developed for Activity 1 above</b>	75,000
<b>Total Resources Required</b>	195,000

## Expected Results

The smoke testing initiative will work towards developing a common protocol for truck testing that is mutually recognized across different jurisdictions. This will help standardize requirements to improve air quality along trade corridors across different jurisdictional lines. It will also minimize disruptions for truck operators when operating across borders as they will be subject to only one set of recognized requirements in all participating jurisdictions. One such example is a common inspection and maintenance procedure for all jurisdictions along the trade corridor from Baja California, California, Oregon, Washington, and British Columbia.

The public health study on exposure to diesel exhaust along two trade corridors will establish a methodology that is transferable to future studies, not only along major trade corridors across North America, but also to other cities and industrial areas with diesel exhaust-related air quality problems. This comparability will help in evaluating whether different compositions of air pollutants in different North American cities lead to different public health impacts. A focus is on diesel exhaust particulates along trade corridors linked to congested border crossings. Such knowledge is crucial in determining whether control strategies in one region will be effective in others.

## Expected Partners and/or Participants

Trade, transportation, health, and environmental agencies from the three countries, citizen groups, local governments, ground-based freight shipping and other private businesses. Initial participants include officials from the General Directorate of Environmental Health in Mexico's Ministry of Health, the California Air Resources Board, State of New York Department of Environmental Conservation, Ontario Ministry of the Environment, Northeast States for Coordinated Air Use Management, Environment Canada, and the US EPA. Also involved will be members of the public health research community. Implementation of the initiative will depend upon active collaboration of key health and environment bodies.

## Linkages to other CEC Projects

The North American dialogue on the environmental considerations associated with transportation corridors remains in its formative stage, affording the CEC an opportunity to play a proactive and preventative role in this fast-developing area. As an interdisciplinary undertaking, the initiative can coordinate with the Sound Management of Chemicals as diesel exhaust from truck traffic is composed of a number of toxic chemicals. Coordination with Children's Health is also desired as the air pollution exposure assessments will include as a sensitive subpopulation children living near congested trade corridor border crossings. Linkages with the Environment, Economy and Trade program can help better elucidate the trade growth pressures that may exacerbate air pollution and congestion along trade routes.

## Actions 2003-2004

### 2003

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Action 1: Continue assessing population exposure to air pollutants along congested trade corridor border crossings  
Other actions to be determined

### 2004

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Action 1: Continue assessing population exposure to air pollutants along congested trade corridor border crossings  
Other actions to be determined

### 3.2.1 Sound Management of Chemicals

#### Project Summary

The Sound Management of Chemicals (SMOC) project is an ongoing intergovernmental initiative to reduce the risks of toxic substances to human health and the environment. The priority has been to address persistent and bioaccumulative toxic substances. The project provides a forum for: a) identifying priority chemical pollution issues of regional concern; b) developing North American Regional Action Plans (NARAPs) to address these priority issues; c) overseeing the implementation of approved NARAPs; and d) facilitating and encouraging capacity building in support of the overall goals of SMOC, with emphasis on the implementation of NARAPs.

The focus to date has been on a chemical-by-chemical approach for a select few substances that are of global concern. However, other approaches to the sound management of chemicals are expected to be given greater attention in the future. These include: (1) strengthening capacity to implement the full range of decisions and commitments contained in Council Resolution 95-05; (2) monitoring, modeling and research assessing exposure to chemicals and risks from them, (3) evaluating progress under the SMOC initiative; (4) the consideration of clusters or groups of chemicals, and specific industrial sectors or industrial complexes; and (5) innovative technologies that emphasize pollution prevention over pollution control.

#### Goals and Objectives

The overall goal of this initiative is to provide a continuing and increasingly effective forum to facilitate cooperation and trilateral agreements and actions on reducing chemical pollution in North America using a life-cycle approach. The activities have been structured to establish an overall framework for the three countries to reduce chemical pollution, with particular focus on chemical substances that are persistent and toxic and which bioaccumulate in living organisms.

The specific objectives for the Sound Management of Chemicals include:

- assisting the Working Group to advance the implementation of the decisions and commitments contained within, or developed pursuant to, Council Resolution 95-05 on the Sound Management of Chemicals, including NARAPs for PCBs, mercury, chlordane, DDT, dioxins, furans and hexachlorobenzene, and any new NARAPs approved for development by the Council;
- providing impetus to the implementation of the NARAPs by supporting specific capacity building and implementation actions;
- monitoring progress in the implementation of the NARAPs;
- seeking to identify new and additional funds to assist the Parties with SMOC; and
- ensuring meaningful public input into the process.

#### Rationale

Chemical pollutants—especially those that are persistent and toxic, that bioaccumulate in living organisms and are transported long distances in environmental media and as products of commerce—have generated a great deal of public and political concern. The nature, scope and significance of the issues related to these chemicals call for effective international cooperation and response. Numerous provisions of the North American Agreement on Environmental Cooperation (NAAEC) provide a formal mandate for this project. Article 10(5)(b) specifically calls for the Council “to promote and, as appropriate, develop recommendations regarding appropriate limits for specific pollutants, taking into account differences in ecosystems” and Article 2(2) states that “each Party shall consider implementing in its law any recommendation developed by Council under Article 10(5)(b).”

Since May 2001, with the signing of the Stockholm Treaty on Persistent Organic Pollutants, the 12 pollutants identified in the treaty have been recognized as chemicals of global concern. It is anticipated that regional cooperation to implement the treaty will be encouraged. The SMOC program has put North America in a leadership position in employing regional approaches.

The increasing emphasis on extension work to develop capacity for implementing existing and potential NARAPs reflects the recognition that, while each of the three countries has capacity building/coordination requirements related to SMOC, the major costs associated with implementation will be directed at Mexico. Immediate concerns relate to the NARAPs for DDT, chlordane, PCBs and mercury. This emphasis also reflects the recognized need to actively support Mexico in implementing these decisions and commitments through capacity building, as well as through the use of CEC funds as seed money to obtain additional funding in support of full implementation for NARAPs and other aspects of Council Resolution 95-05.

### Progress to Date

A framework agreement in the form of Council Resolution 95-05 on the Sound Management of Chemicals was developed and adopted to facilitate regional cooperation and action to address persistent and toxic chemicals in North America. The Working Group was also established by Council, under Resolution 95-05, to implement the decisions and commitments set out in the Resolution. The initial focus was on the sections of the Resolution that are aimed at joint collaborative planning to develop North American Regional Action Plans (NARAPs) for chemicals that are persistent and toxic. The Working Group has generally met twice each year to review and stimulate progress, to consult with stakeholders, and to provide general and specific guidance to its subsidiary bodies and to the Secretariat.

NARAPs for three substances on the United Nations Environment Programme (UNEP) list of persistent organic pollutants—PCBs, DDT and chlordane—have been developed and approved by the CEC Council. A fourth NARAP on mercury has been completed and was approved by the Council in Dallas, Texas, at its seventh regular meeting. This Phase II component of the NARAP delineates specific actions as a follow-up to the Phase I component, which established the framework for trilateral action to reduce mercury uses and releases to the environment.

Under the “Process for identifying candidate substances for regional action under the Sound Management of Chemicals Initiative,” the countries review substances that have been nominated by one or more of them to determine if trilateral action is warranted. Documents pertaining to this process are posted on the CEC web site and are also available in a consolidated report, entitled *The Sound Management of Chemicals Initiative under the North American Agreement on Environmental Cooperation: Regional Commitments and Action Plans*. In 2001, a process evaluation was made that has been used to review an initial set of priority substances, as set forth in Resolution 95-05, to determine if revisions are required to move from a chemical-by-chemical approach to a broader context. As a result of this review, consideration will be given to the ability of the process to address classes or clusters of chemicals or industrial sectors, and holistic concerns, such as endocrine disruption or high-risk populations such as children or indigenous peoples. Opportunities will be sought to link with the Children’s Health project.

The implementation phase of each approved NARAP is being guided by a trilateral Implementation Task Force. The Substance Selection Task Force (SSTF), overseeing the “Process for identifying candidate substances for regional action under the Sound Management of Chemicals Program,” has recommended that a NARAP be developed for lindane, a substance that, while no longer manufactured in North America, is still stockpiled and is found in public health products (e.g., shampoo to control head lice).

In 2001, a project was launched to develop a NARAP on dioxins and furans, hexachlorobenzene. This NARAP will address a cluster of compounds that are typically formed as unwanted byproducts and released to the environment during activities which include the production of certain commercial chemicals or the thermal destruction of household, hazardous, commercial and municipal wastes. It is anticipated that a comprehensive NARAP could require approximately two to three years work. However, the Parties have identified NARAP activities that are candidates for early action. To accommodate early action, the dioxins and furans, and hexachlorobenzene NARAP is being released in two phases. Phase I documents actions that will be initiated within approximately the first two years of implementation.

Phase II will document actions that might need a longer timeframe. In 2001, with CEC support, a baseline air emissions inventory was prepared for dioxins and furans. This will be linked with the Canadian and US inventories to give an overall North American picture of releases and will assist in setting priorities for action under the NARAP. It is anticipated that work at key junctures of NARAP development will be coordinated with activities of the International Joint Commission (Canada and the United States) and its International Air Quality Advisory Board, as well as Task Force on Monitoring and Assessment. For example, work will commence to set up a dioxin/furan air monitoring network in Mexico through collaboration between the two task forces.

A draft NARAP on monitoring and assessment of persistent toxic substances (PTS) was prepared in 2001. This NARAP will undergo public review and will be finalized in 2002. Since human health and environmental quality are inextricably linked, efforts will be made to ensure that the health monitoring is included as part of the NARAP.

In addition to the development and implementation of NARAPs, an important feature of the SMOC initiative is its capacity-building/leveraging program. Activities under this aspect of the program are intended to assist in generating financial resources from a variety of international agencies with a view to assisting Mexico in the implementation of NARAPs and to meet other needs arising from Council Resolution 95-05 on the Sound Management of Chemicals. In 2000, the CEC proposed procedures to enhance coordination of the reviews for identifying and evaluating projects. In 2001, a leveraging strategy was developed to help secure outside resources through consulting firms that have expertise in international capacity building.

Mexico has made great strides in the implementation of the DDT NARAP. As of 2000, they have successfully eliminated the use of DDT—surpassing the 80 percent reduction target specified in the NARAP. In 1999, the CEC developed a grant proposal directed to the Global Environment Facility to assist with implementation of the NARAP on DDT. The Global Environment Facility funding, as well as assistance provided through the International Development Research Council to develop the proposal to Global Environment Facility, will help to ensure that the success of the NARAP

and Mexico's experience can be transferred to other countries in the Caribbean, and Central and South America.

The Chlordane Implementation Task Force in 1999 provided its evaluation report of NARAP implementation on this substance. With the cessation of its manufacture, and the use of alternative products, this NARAP has been successfully concluded. The task force has raised concerns about the potential for illicit imports and uses of chlordane. SMOC will examine appropriate follow-up steps.

The PCB Implementation Task Force in 1999 prepared a status review of this NARAP, paying particular attention to the many aspects of the NARAP not dependent on the transboundary transport and destruction of unwanted PCB materials. In 2000, the task force successfully facilitated trilateral discussions on stranded shipments of PCBs aimed at addressing these in an expeditious and environmentally sound manner (Actions 5.14 and 5.15). In 2001, the CEC sponsored a workshop on alternative disposal technologies for PCBs, and a status report was prepared to determine whether the commitments and actions in the NARAP have been met.

The CEC's North American Fund for Environmental Cooperation (NAFEC) is another source of potential funding for capacity-building initiatives that may overlap with the goals and objectives of SMOC. NAFEC funding supports community-based environmental projects in Canada, Mexico and the United States. In 2000, NAFEC funded a project to determine the extent to which mercury switches are used in automobiles and to determine best practices.

With the signing of the Stockholm Treaty on Persistent Organic Pollutants, enhanced cooperation is anticipated with UNEP. An MOU has been signed between the CEC and UNEP, identifying North America as one region in a global effort to conduct a regionally based assessment of priorities for persistent toxic substances (PTS). This is a two-year initiative that is intended to provide the Global Environment Facility with a science-based rationale for assigning priorities for action among and between chemical-related environmental issues, and to determine the extent to which differences in priority exist among regions.

## Actions 2002

In 2002, resources will be available to continue to facilitate the implementation of those mercury NARAP actions determined by the CEC Council to be priorities for trilateral action. These include:

- a project to institute an air monitoring network for mercury in Mexico that is compatible with those that exist in Canada and the United States;
- a review of national reporting mechanisms used to track the ultimate fate of mercury-containing wastes;
- a public education and awareness campaign regarding the hazards of mercury.
- As well, the mercury implementation task force will work with the Task Force on Monitoring and Assessment to ensure that the NARAP on monitoring and assessment of persistent toxic substances, developed in 2001, incorporates pertinent actions noted in Phase II of the NARAP on mercury.

## Overview

The major functions and responsible entities for carrying out the operational aspects of the SMOC initiative are:

*Project planning and management.* The Working Group will be holding two meetings in 2002 and will be providing project updates after each meeting. A five-year strategic plan finalized in 2000 is used by SMOC to guide and assess progress on its activities. The Working Group is also responsible for reviewing the evaluation of the SSTF process and making recommendations on it to the Council. The Working Group will examine existing public consultation processes to determine if improvements can be made to follow and provide input into the work. SMOC Working Group will endeavor to coordinate one of their meetings with that of the PRTR Consultative Group, as a measure to increase public participation and coordination between CEC projects.

*Implementation of actions in the NARAP on mercury with facilitation of trilateral activities, and tracking of overall progress on domestic implementation to be provided by the Implementation Task Force on mercury.* The Implementation Task Force will continue to focus priorities on building capacity in Mexico by assembling a funding proposal for capacity building in the area of education and awareness-raising with health professionals and other opinion leaders. This proposal will be discussed with potential partners and the funds will be sought from international funding institutions. Efforts will continue at establishing a mercury deposition network in Mexico. The recently completed Canadian, Mexican and US inventories of air emissions and of 'hot spots' will be peer reviewed and published as a compendium to give the first-ever picture of mercury sources and releases on a North American scale.

*The Substance Selection Task Force of the SMOC Working Group* recommended during the eleventh regular meeting of the SMOC Working Group development of a NARAP on lindane. The SMOC Working Group has endorsed this recommendation and has forwarded a request to Council to pass a resolution to develop a NARAP. If approved by Council, the development of the NARAP will commence in the third quarter of 2002 and a draft should be ready for public consultation by the end of that year.

*Development and implementation of the NARAP on dioxins and furans, and hexachlorobenzene.* The task force developed the draft Phase I NARAP in 2001 based on advice received during an expert workshop followed by a public workshop. Finalization and implementation of the Phase I NARAP is foreseen for 2002 as preparatory work on a Phase II program. It is anticipated that capacity building will be a significant component of the work program given that dioxin and furan analyses are extremely complex and expensive. Efforts will be made to set up air monitoring sites in Mexico to match those existing in Canada and the United States. This NARAP represents the first attempt by SMOC to deal with clusters of chemicals using a sectoral approach.

*Development and implementation of a NARAP on monitoring and assessment of persistent toxic substances*, as directed by Council in Resolution 99-02. In 2001, a draft NARAP was prepared. It will undergo extensive public and peer review early in 2002 and be submitted for approval for implementation. The NARAP has four key elements, short-term actions to address monitoring needs for mercury and dioxins and furans, medium-term actions to build a North American core group of experts to expand the network, long-term actions aimed at assembling a comprehensive North American monitoring and assessment network, and a capacity building element aimed at seeking significant financial resources to allow Mexico to establish its own monitoring network and support infrastructure. The latter is expected to require capacity-building funds, either through the capacity-building component of the SMOC program and/or via leveraging of external funds.

*Completion of the DDT NARAP is anticipated in 2002*, given that Mexico has completed agreed upon actions more quickly than anticipated. However, the capacity building work that has been undertaken under Mexico's leadership with Central America will continue with financial support from the Global Environment Facility. Periodic progress reports will continue.

The chlordane NARAP was completed in 2001. Periodic progress reports will be made.

*The NARAPs are intended to be results oriented*. Therefore when all the actions are completed a review will be undertaken to ensure that expectations have been met, a final report will be prepared and NARAP activity will cease. However it is anticipated that there will be circumstances where periodic follow-up may be required. The SMOC Working Group will develop a guidance document to establish the ground rules for terminating NARAP activity.

*The Sound Management of Chemicals program examines environmental and human health implications of releases of chemicals on a life cycle basis*. Based on recent studies by experts and media reports, there is growing concern about hazardous waste movements across the Canadian-US border. At its meeting in Guadalajara, the CEC Council requested that this issue be examined in a North American context. In 2002, assistance will be provided to the Law and Policy Program to identify gaps in current hazardous wastes management policies in North America and recommend solutions.

*With the signing of the Stockholm Treaty on Persistent Organic Pollutants, global attention is now being focused on development of strategies to reduce or eliminate the use of the 12 substances identified in the treaty*. North America is in a leadership position in that the SMOC program is already in the implementation stage of dealing with many of these substances. UNEP and the Global Environment Facility have developed a project to undertake a regionally based assessment of persistent toxic substances. The objective of this work is to assist the Global Environment Facility in setting funding priorities for the future. For the purposes of the project, the globe has been divided into 12 regions, one of which is North America (Canada, Mexico and the United States). An MOU has been signed between the CEC and UNEP for the CEC to undertake the role of 'regional coordinator' for the North American region. In 2002, a report will be completed outlining the North American set of priorities for persistent toxic substances. In addition, a cross-section of North American monitoring activities will be provided to UNEP in electronic form in order to help build a global database on persistent toxic substances in the ecosystem. Since there are a number of North American sites where wildlife species are monitored as sentinel indicators of contamination by such substances, a cooperative project will be designed to assemble and interpret these databases.



**2002****Estimated Resources Required (C\$)**

<b>Action 1: Working Group</b>		<b>145,000</b>
<p>This action supports the SMOC Working Group's core functions, including the overall direction and coordination of the SMOC initiative, timely development of analyses and documents, and assessing and reporting on progress under the initiative</p>		
Activity 1: Two meetings and conference calls of the SMOC Working Group	75,000	↓
Activity 2: Professional fees for strategic contractor support to SMOC	35,000	
Activity 3: Public Reporting and Outreach activities	10,000	
Activity 4: Reporting to Alternate Representatives and Council, review of NARAP development and implementation	5,000	
Activity 5: Developing support documents and products for use in leveraging outside funding	15,000	
Activity 6: Enhance public participation	5,000	
<b>Action 2: Task Force Reviews</b>		<b>30,000</b>
<p>This activity will support work of the task forces on DDT and PCBs to review and report on the implementation of these NARAPs and prepare final reports if it is determined that the actions have been completed. The SMOC Working Group will decide whether and when to do a follow-up report on chlordane</p>		
Activity 1: DDT Final Report	15,000	↓
Activity 2: PCBs Final Report	15,000	
<b>Action 3: Capacity-building Program</b>		<b>234,000</b>
Activity 1: A multi-agency effort to acquire US \$7.5 million in GEF funding for DDT elimination capacity building in Mexico and Central America. The approval process is nearing completion. Once it is approved, the CEC will become a financial contributing partner with funds set aside for this purpose. The CEC contribution is estimated to total US \$200,000 over a three-year period. In year one, the CEC will contribute C\$167,000 towards technical support and demonstration project in Mexico to evaluate alternative strategies of malaria vector control without the use of DDT	167,000	↓
Activity 2: This activity involves using CEC capacity-building resources to leverage larger funding for implementation of NARAP commitments, for example from the Global Environment Facility or the World Bank. Typically, this activity requires extensive preparation of project proposals and a time-consuming project start-up cycle. This component of SMOC activities will be coordinated with the SMOC Working Group and its task force chairs. In particular, these groups will highlight particularly important NARAP activities requiring additional resources from outside of the CEC	67,000	

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**Action 4: Mercury Implementation Task Force****110,000**

This activity involves the coordination of trilateral implementation activities, information exchange, and review of Phase II mercury NARAP implementation activities. This includes funding one or more task force meetings and several conference calls to implement the NARAP and consult with the Working Group. Core activities in this work plan will include: NARAP Action 3a, iv, pertaining to review of national reporting mechanisms used to track the ultimate fate of mercury-containing wastes; NARAP Action 6a,iii, pertaining to public reporting to the Council on progress; NARAP Action 5, pertaining to communications; NARAP Action 4b, regarding coordinating implementation activities with the NARAP on monitoring and assessment of persistent toxic substances (PTS); and other efforts to accelerate NARAP implementation, such as activities associated with elimination of harmful exposures of children to mercury, and a trilateral reporting system to track NARAP implementation at the national level. The recently completed North American inventory of emissions and 'hot spots' will be peer reviewed and published

Activity 1: Mercury deposition monitoring network	10,000
Activity 2: Tracking of mercury products and wastes in North America	5,000
Activity 3: Publish inventory of air emissions and other 'hot spots'	2,500
Activity 4: Communication, education and awareness	20,000
Activity 5: Mercury substitution and elimination demonstration projects	20,000
Activity 6: Initiate a capacity building project for Mercury	25,000
Activity 7: Support to Task Force (meetings, conference calls, consultant services, etc.)	25,000
Activity 8: Preparation of NARAP progress report and related communications products	2,500

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**Action 5: NARAP Development Task Force****50,000**

This activity will include providing support for development of additional NARAPs, if deemed necessary by Council, including facilitating formation of the task force (e.g., terms of reference, work plan development); task force meetings, with input by experts and stakeholders; several conference calls at various stages of NARAP development; an extensive experts/stakeholder consultation meeting; preparation of various drafts of the NARAP; and public consultation and revision of the NARAP based on comments received. These funds will be re-programmed in the event no new NARAPs are indicated

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**Action 6: Dioxins and Furans, and Hexachlorobenzene NARAP Development Task Force****140,000**

This activity involves support for completing Phase I NARAP development, initiation of Phase I implementation and beginning development of the Phase II NARAP on dioxins and furans, and hexachlorobenzene (i.e., similar to the methodology followed for Phase I and II of the NARAP on mercury). General activities will include support for task force meetings, with input by experts and stakeholders; several conference calls at various stages of NARAP development; an extensive expert/stakeholder consultation meeting; preparation of various drafts of the NARAP; and public consultation and revision of the NARAP based on comments received. Specific activities will include cooperation with the International Air Quality Advisory Board of the International Joint Commission (Canada and the United States), and support for the peer review and publication of the inventory on dioxins, furans, and hexachlorobenzene

Activity 1: Task Force meeting, consultations with stakeholders, conference calls	20,000
Activity 2: Phase I implementation. Actions under consideration by the Task Force include examining feasibility of developing of a sampling network in Mexico, sampling of lake cores in Mexico, or initiate blood survey in Mexico	120,000

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**Action 7: Monitoring and Assessment NARAP Development Task Force** **140,000**

This activity involves support for public review phase of the draft NARAP on monitoring and assessment of persistent toxic substances (PTS) and implementation of the approved action plan. General activities will include support for task force meetings with input by experts and stakeholders; several conference calls at various stages of NARAP implementation; an expert/stakeholder consultation meeting to assist in the design of one or more networks for NARAP substances (i.e., DDT, chlordane, PCBs, mercury, dioxins and furans, hexachlorobenzene, and any NARAP approved for development by the Council); preparation of a capacity building initiative and provision of a progress report. Other elements will include identifying children's exposure to NARAP substances and a North American gap analysis on family/child environmental health indicators and monitoring parameters as they apply to NARAP substances. Tracking the ultimate fate of NARAP substances and NARAP implementation results will be accomplished largely through existing monitoring networks in the United States and Canada, while in Mexico the focus is anticipated to be on establishing new sites to achieve North American coverage. Comparability of data and data-gathering methodologies will also be a key focus of this effort

Activity 1: Task Force meeting, consultations with stakeholders, conference calls	20,000
Activity 2: Implementation. Actions to address monitoring needs for NARAP task forces including mercury, dioxins and furans, PCBs, human blood	40,000
Activity 3: Implementation. Actions to address longer-term monitoring and assessment requirements for North America	40,000
Activity 4: Workshops on monitoring field and lab procedures	40,000

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**Action 8: Substance Selection Task Force** **40,000**

This activity will involve support for one or more meetings of the Substance Selection Task Force and several conference calls

Activity 1: Task Force meetings and conference calls	20,000
Activity 2: The Task Force will finalize decision on lead	5,000
Activity 3: The recently completed review of the substance selection process will lead to revisions in the process. Issues to be considered will include expanding the process to address substances by classes, clusters or sectors, for example to allow for a more holistic consideration of endocrine disrupters	15,000

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**Action 9: Regionally Based Assessment of Persistent Toxic Substances** **30,000**

The Secretariat will assume the duties of regional coordinator for North America and will work with SMOC to prepare the 2 key elements specified in the MOU with UNEP: a North American assessment of priorities for persistent toxic substances and an electronic summary database of North American environmental and human health monitoring related to persistent toxic substances. Two conference calls, a report, and a workshop are planned as part of this undertaking. Depending upon the recommendations contained in the report, further cooperative work may be undertaken with UNEP regarding the Regionally Based Assessment. Under the terms of the MOU, an additional contribution of US\$15,000 will be provided by UNEP

Activity 1: Conference calls	2,000
Activity 2: Preparation of North American status report on persistent toxic substances	14,000
Activity 3: Workshop	14,000

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**Total Resources Required 919,000**

## Public Participation

SMOC convenes two annual public meetings and reporting sessions, in addition to public consultation, both at formative stages of NARAP development and during implementation. SMOC-related documents are placed on the CEC's web site and are intended as a means of improving the transparency and accountability of the SMOC initiative. Representatives of industry, academia, environmental and aboriginal groups are also included as observers on its task forces. It is anticipated that one of the SMOC meetings will take place in coordination with the PRTR Consultative Group. Innovative approaches will be sought to engage those members of the public without internet access.

SMOC will continue to attempt to engage these different groups, such as those that participated in a meeting in Mexico City, supported with financial resources from the CEC, and are listed as follows: *Periodismo para Elevar la Conciencia Ecológica*, *Fuerza Ambiental*, *Colectivo Ecologista de Jalisco*, *Instituto de Derecho Ambiental, A.C.*, *Red Fronteriza Salud y Ambiente*, *Proyecto Fronterizo de Educación Ambiental*, *DASSUR*, *Red Ambiental de Veracruz*, *Instituto Estatal de Ecología*, *CIEPAC*, *Educación y Defensa Ambiental, A.C.*, *Asociación Ecológica Sto. Tomás*, *Red de Comunicación de Morelos*, *Center for Health Environment and Justice*, *Greenpeace*, *Great Lakes United*, *Asesora Inuit*, *Sierra Club Canada*, *Health Care Without Harm*, *Texas Center for Policy Studies*, *Pesticide Action Network*, *Centro Mexicano de Derecho Ambiental*, *Greenpeace Mexico*, *Comexani*, *Red Nacional Promotoras y Asesoras Rurales*, *EMABP*, *Emisiones*, *Fronteras Comunes*, *RAPAM*, *UAM Unidad Azcapotzalco*, *UAM Unidad Xochimilco*, *IPN*, *Instituto Nacional de Salud Pública*, *RMALC*, *Mujer y Medio Ambiente*, *La Red por la Salud de las Mujeres*, *UGAM*, *Red de Permacultura*, *Huicholes y Plaguicidas*, *Guerreros Verdes* and *Radio UNAM*.

## Capacity Building

The SMOC initiative is well into its implementation phase and is therefore integrating a capacity building component into most aspects of the work, particularly in the implementation of NARAPs. Increasingly, emphasis will be on leveraging

new or additional funds to assist Mexico in capacity building to support the Sound Management of Chemicals program.

In 2002, the capacity-building efforts will focus on developing and submitting major funding proposals to international financial institutions to support the enhancement of Mexico's capacity to implement specific provisions of the NARAPs, as well as the more general provisions of the Sound Management of Chemicals Resolution. In addition to the current Global Environment Facility initiative noted above on DDT, it is anticipated that leveraging of funds be undertaken in support of NARAP implementation.

## Expected Results

Implementation of key actions identified in Phase II of the mercury NARAP will be well underway in 2002. The NARAPs on DDT and PCBs will be examined to determine if actions have been satisfactorily implemented and objectives met. An exception may be for those of an ongoing nature that have been institutionalized within the governments and, possibly, capacity-building efforts pertaining to assessment of alternatives to DDT and chlordane. Implementation for the NARAPs developed in 2001 on dioxins, furans and hexachlorobenzene, and monitoring and assessment is foreseen for 2002. Once approved by Council, development of the lindane NARAP could commence in 2002.

The substance selection process will have undergone evaluation and it is anticipated that revisions, based on SMOC recommendations, will provide direction that continues to place North America in the forefront of coordinated national actions that demonstrate leadership and advance implementation of commitments made under binational and multinational agreements.

The SMOC Working Group is closely engaged with the Children's Environmental Health project to ensure that work is focused on toxic chemicals, including pesticides, that particularly impact children and other high risk populations.

The MOU with UNEP will commence implementation in 2002. This will be an opportunity to showcase the work that SMOC has done to support the objectives of global treaties (e.g., POPs) in the North American region. Work will be undertaken to assemble monitoring data related to the impact of persistent toxic substances on wildlife.

In cooperation with the Law and Policy program area, hazardous waste management policies will be examined on a North American basis to determine if there are opportunities to improve policies and programs to meet North American needs in the context of global and regional efforts.

### Expected Partners and/or Participants

This initiative is an inclusive, consensus-building effort that involves different levels of government, industries and industrial associations, environmental nongovernmental organizations and the academic community. International and binational institutions such as the International Joint Commission, and the New England Governors and Eastern Canadian Premiers are involved as participants or as cosponsors of events. Furthermore, international, binational and national aid and lending agencies are likely to be increasingly involved in the future.

### Linkages to other CEC Projects

The Sound Management of Chemicals program has maintained a close working relationship with CEC programs on Enforcement Cooperation and Cooperation on North American Air Quality Issues that are directly relevant to the development and implementation of specific NARAPs. In addition, the NARAP on monitoring and assessment of persistent toxic substances (PTS) is building on marine monitoring efforts in the Gulf of Maine and the Bight of the Californias and is developing close linkages with the projects to be conducted under the Conservation of Biodiversity program area, including that on the mapping of marine and estuarine ecosystems in North America.

A joint project with the biodiversity program area is anticipated to pull together a summary of available North American monitoring data on impacts of persistent toxic substances on wildlife. Efforts will be directed at strengthening linkages between the SMOC Working Group and the project on Children's Health and the Environment. Linkages will also be made between certain NARAPs and the PRTR initiative to determine whether PRTRs can be used as the tracking mechanism for measuring progress under the NARAP. Mercury and dioxins and furans are candidates for analysis in such an effort.

## Actions 2003–2004

2003, 2004

The Sound Management of Chemicals initiative has been ongoing since 1995 and, while the program does evolve in response to new requirements, the changes in actions/activities are expected to be relatively modest in 2003 and 2004. At this time, it is expected that funding levels will be similar to those that have existed in the past, although the mix of actions/activities will shift somewhat in response to both foreseen and unforeseen events. The CEC will continue with the development and review of NARAPs, as well as the selection of additional substances. A new role that is developing for the CEC relates to the regional assessment of persistent toxic substances. Working with UNEP, this role would be to act as the regional coordinator for North America. Although the details are still uncertain, it is anticipated that such a role can be readily integrated into the ongoing SMOC program.

### 3.3.1 North American Pollutant Release and Transfer Register

#### Project Summary

The CEC's North American PRTR project seeks to increase access to and understanding of information on sources and handling of toxic chemicals from industrial activities in North America through:

- publishing an annual report on North American pollutant releases and transfers (*Taking Stock*);
- providing access to comparable data on pollutant releases and transfers in North America through the *Taking Stock* web site;
- promoting enhanced comparability among the national PRTR systems; and
- exploring ways to improve access and enhance understanding of PRTR data in collaboration with stakeholder groups.

The project also contributes to global and regional PRTR-related activities through collaboration with other international organizations (e.g., the Organization for Economic Cooperation and Development—OECD, the Intergovernmental Forum on Chemical Safety—IFCS, United Nations Economic Commission for Europe—UNECE).

#### Goals and Objectives

The goal of the project is to promote public access to information on pollutant releases and transfers in North America in order to enhance understanding of sources and handling of toxic substances, provide an informed basis for stakeholder dialogue and priority-setting, and to foster pollution reduction efforts.

Specific objectives of the project include:

- providing an annual overview and analysis of North American pollutant release and transfer data;
- 'sharpening the picture' of pollutant releases and transfers in North America by fostering efforts to improve the comparability of the data collected by the national PRTR systems;

- undertaking special analyses that make use of PRTR data and other relevant information to gain further insight into pollution-related issues of particular interest in North America;
- enhancing the utility of PRTRs to citizens, communities, industry, government and other interested parties by fostering the use of PRTRs as a tool for priority setting and tracking progress, finding ways to enhance understanding of PRTR data, and exploring opportunities for using PRTR in combination with other data (e.g., health, environmental, demographic, economic) in order to gain further insights into issues of concern;
- providing leadership in the global context, drawing upon North American PRTR-related expertise and experiences.

#### Rationale

Pollutant release and transfer registers (PRTRs) provide data on types, locations and amounts of substances of concern released to the environment and transferred off-site by industrial and other facilities. As stated in CEC Council Resolution 00-07, PRTRs are valuable tools "for the sound management of chemicals, for encouraging improvements in environmental performance, for providing the public with access to information on pollutants released and transferred into and through their communities, and for use by governments in tracking trends, demonstrating progress in pollution reduction, setting priorities and evaluating progress achieved through environmental policies and programs."

Over the past decade there has been a growing interest worldwide in PRTRs and related issues of public access to environmental information. Among the principles and commitments agreed to in *Agenda 21* at the 1992 United Nations Conference on Environment and Development were provisions calling for the development of emissions inventories and programs to promote the public's and workers' right-to-know. The Organization for Economic Cooperation and Development (OECD), of which all three North American countries are members, issued a Council Recommendation in 1996 which calls upon member countries to establish, implement and make public

national PRTRs and promote comparability among national PRTRs and sharing of PRTR data between neighboring countries. The Intergovernmental Forum on Chemical Safety (IFCS) has also focused on the topic of PRTRs, including a special session on PRTRs in October 2000. A working group on PRTRs has also been recently formed in the context of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

North America is well positioned to serve as a global leader in the development and use of PRTRs nationally and regionally. Each of the three North American countries has a national PRTR program. The US program, called the Toxics Release Inventory (TRI), first collected data from facilities for the 1987 reporting year. Facilities began submitting data to the Canadian National Pollutant Release Inventory (NPRI) for the 1993 reporting year. In Mexico, 1997 was the first year of reporting under the voluntary *Registro de Emisiones y Transferencia de Contaminantes* (RETC) program, and in 2001 the government announced its intention to make PRTR reporting mandatory. Through the CEC, the North American countries are breaking new ground by putting together and analyzing the data collected through these national programs on a regional scale, and making that information available to the North American public through the annual *Taking Stock* reports and web site.

PRTRs are an innovative tool that can be used for a variety of purposes. PRTRs track substances that are considered hazardous to human health and/or the environment, and thereby help industry, government and citizens identify priorities for action and assume responsibility for chemical use. For example, many corporations use the data to report on their environmental performance and to identify opportunities for reducing/preventing pollution. Governments can use PRTR data to define and evaluate program priorities. Communities and citizens use PRTR data to gain an understanding of the sources and management of pollutants and as a basis for dialogue with facilities and governments. Activities in the context of the CEC PRTR project aim to promote and expand upon these various uses of PRTRs by various sectors of civil society.

## Progress to Date

In July 2001, the CEC published *Taking Stock 1998*, the fifth in the annual series of *Taking Stock* reports on North American pollutant releases and transfers, which featured a new two-volume format as well as data from additional industrial sectors and on transfers to recycling. The *Taking Stock* reports present an overview and analysis of data on pollutant releases and transfers from industrial facilities in North America, based on information collected through the national PRTR programs. To compare data from national PRTRs with different reporting requirements, the CEC relies on selecting the elements they have in common in order to create a matched data set. This matched North American data set is the basis for the information and analyses provided in the *Taking Stock* reports and on the web site. To date, *Taking Stock* includes data from Canada and the United States only; data from Mexico that would be comparable to US and Canadian PRTR data are not yet available.

In developing the *Taking Stock* reports, the CEC uses an extensive consultative process that includes circulation of a discussion document, a public meeting of the trilateral multi-stakeholder Consultative Group, receipt of written comments, and the preparation of a response-to-comments document. The CEC PRTR project has benefited greatly from the input and suggestions obtained from representatives of industry, government, NGOs, citizens and researchers through this consultative process. During its public meeting in March 2001, the Consultative Group took part in a roundtable discussion on the opportunities and challenges of PRTR reporting in Mexico with the participation of high-level officials from the Mexican government, and held a special session on uses of PRTR data.

The process of putting together nationally-collected PRTR data on a regional scale highlights some of the differences among the national systems, and thereby serves to identify opportunities for collaboration and enhanced comparability among the national programs. At the Fourth Annual Regular Session of the CEC in June 1997, the Ministers passed Council Resolution 97-04, "Promoting Comparability of Pollutant Release and Transfer Registers (PRTRs)," which

commits the three governments to work toward adopting more comparable PRTRs, while recognizing that each country has its own approach to the collection and use of environmental data.

In June 2000, during its seventh annual regular session in Dallas, Texas, the CEC Council issued Resolution 00-07 on Pollutant Release and Transfer Registers (PRTRs). In this resolution, the Council recognized a set of basic elements that are central to the effectiveness of PRTR systems, reaffirmed its commitment to publish an annual report on pollutant releases and transfers in North America (*Taking Stock*), and agreed to continue its individual and collective efforts to promote PRTRs, including public access to and use of PRTR data domestically, regionally and internationally.

In 2001, officials from the three national PRTR programs worked together, with the assistance of the Secretariat, to compile an action plan to enhance the comparability of North American PRTRs. The interactions that take place among the PRTR officials in the context of CEC meetings and activities have also served to facilitate an informal and ongoing exchange of information and experiences among the three national programs.

In July 2001, when the CEC published the *Taking Stock 1998* report, the CEC also launched the *Taking Stock* web site. The website provides users with direct access to the matched data sets used in the *Taking Stock* reports through a flexible 'query builder' function. The trilingual site also provides information on PRTRs in North America, presents highlights from the most recent *Taking Stock* report and provides contextual and explanatory information in order to assist users in understanding and using the data.

A meeting of the multi-stakeholder Consultative Group for the North American PRTR Project was held in Montreal, Quebec, on 12–13 December 2001, in conjunction with a public consultation on the development of a North American criteria air contaminants inventory, organized by the CEC's Air Quality Project.

## **Actions 2002 Overview**

### **Annual Meeting of Consultative Group for the North American PRTR Project**

The annual public meeting of the PRTR Consultative Group will be held in fall 2002, as a forum for stakeholders to provide input into the further development of the *Taking Stock* series, including the report, web site and special feature analyses. The meeting will also be an opportunity for stakeholder groups from throughout North America to share information and discuss a selected PRTR-related topic(s) of interest, for which a discussion paper or other background material will be prepared. Opportunities for holding the meeting in conjunction with a SMOC meeting will be explored.

### **Development and publication of *Taking Stock* reports**

In 2002, the *Taking Stock* report on 2000 data will be developed and published, and planning for the 2001 data report will be initiated. Efforts will be made to include data from Mexico's evolving PRTR program, wherever possible.

### **Development and publication of special feature report**

In 2002, the CEC will develop and publish a special feature report, complementary to the *Taking Stock* series, on a particular topic of interest. The topic will be selected by the Secretariat taking into account suggestions from the members of the Consultative Group as well as the input and interests of the national PRTR representatives.

### **Operation, updating and further development of the *Taking Stock* web site**

In 2002, the CEC will update the data sets in the *Taking Stock* web site, and undertake further developments to the site to improve its usability, taking into account feedback from users.



### Facilitating a ction to enhance the comparability o f North American PRTRs

In 2002, the CEC Secretariat will work with the national PRTR programs to identify specific opportunities for increasing the degree of comparability among the national PRTRs, building on the action plan developed in 2001. This work will include contracting the development of issues/options papers on selected topics, the organization of periodic conference calls and one face-to-face meeting among the PRTR program officials, support for the further development of the Mexican RETC program, and/or other activities as appropriate.

### Promoting use, access and understanding of PRTR data

The CEC will continue to support the work of the *ad hoc* group on uses of PRTR data, formed in 2001 under the auspices of the Consultative Group. The results of the work

started in 2001 will be completed and disseminated, and depending on level of interest, a second project may be initiated.

### Coordination with OECD, international and hemisphe ric PRTR activities and general outreach

Recognizing the growing interest in PRTRs worldwide and the potential for North America to play a leadership role, the CEC will continue and increase its collaboration with the OECD, relevant UN bodies and other regions and countries. This will include the involvement of the CEC in meetings and activities of the Interorganization Program for the Sound Management of Chemicals (IOMC) PRTR Coordinating Group, the OECD Task Force on Release Estimation Techniques (June, 2002), and the PRTR working group meetings organized by the Secretariat of the Aarhus Convention.

## 2002

## Estimated Resources Required (C\$)

Action 1: Annual Meeting of the Consultative Group		55,000	
Action 2: Taking Stock data analyses and report development		220,000	
Activity 1: <i>Taking Stock</i> 2000 (Phase II)	95,000		↓
Activity 2: <i>Taking Stock</i> 2001	125,000		
Action 3: Editing, translation, printing and distribution of <i>Taking Stock</i> reports (1999, 2000 data reports)		100,000	
Action 4: Special feature report		25,000	
Action 5: Operation, updating and further development of the <i>Taking Stock</i> web site		15,000	
Action 6: Facilitating a ction to enhance the comparability o f North American PRTRs		22,000	
Action 7: Promoting use, access and understanding of PRTR data		30,000	
Activity 1: Activities of <i>ad hoc</i> group	30,000		↓
Action 8: Coordination with OECD, international and hemisphe ric PRTR activities and general outreach		12,000	↓
		<b>Total Resources Required</b>	<b>479,000</b>

## Public Participation

Consultations and collaboration with stakeholder groups—including governments, industry, public interest groups and others—are an essential part of the CEC's PRTR program. A multi-stakeholder Consultative Group, composed of a broad range of interested groups and individuals from the three countries, has helped to guide the development of the annual *Taking Stock* reports and other aspects of the CEC PRTR program. The Consultative Group currently numbers more than 200 people from all three countries, including industry representatives, academics, environmental and public health advocates, community activists, government representatives at the federal, state/provincial and local levels, researchers, policy analysts, and interested citizens. A number of these individuals and groups have also become directly involved in implementation of project activities. Individuals interested in becoming part of the Consultative Group are encouraged to contact the CEC Secretariat.

Although public comments are welcome at any time, the formal consultative process for the *Taking Stock* reports includes:

- disseminating a discussion paper outlining options to be considered for the content and format of the upcoming report;
- obtaining input from the Consultative Group and other interested parties through organization of a public meeting and receipt of written comments; and
- preparing a response-to-comments document summarizing the comments received and outlining CEC's proposed approach in light of stakeholder input.

To ensure that public input can be fully taken into account, the consultations are conducted early in the process, prior to beginning report development.

## Capacity Building

Support for the further development and implementation of the Mexican PRTR system has been among the main priorities for the North American PRTR program, with a view to attaining the goal of comparable chemical-specific and facility-specific PRTR data for the entire North American region. Activities have focused on increasing the technical

capacities of government and industry related to the reporting and management of PRTR data, raising public awareness of PRTRs and access to information, and supporting relevant activities of community groups. In 2002, the project will seek ways to support the move towards a mandatory reporting system in Mexico as part of the ongoing efforts to enhance comparability of North American PRTRs.

## Expected Results

The primary results of the project include the publication of the annual *Taking Stock* reports, special feature analyses and the operation of the *Taking Stock* web site. The *Taking Stock 1999* report is expected to be released in Spring 2002; the *Taking Stock 2000* is slated for release in Winter 2002/2003. In addition, the project is expected to foster improvements in the comparability of PRTR data on a continent-wide basis over the medium- and long-term, as a result of the ongoing interactions among the national programs and efforts to address issues of comparability. The project is also expected to foster and highlight innovative and practical uses of PRTR data by various groups (e.g., industry, NGOs, government, academics), thereby improving the utility and benefits of PRTRs as a tool for environmental management.

## Expected Partners and/or Participants

The CEC works with the following groups and organizations in the context of the PRTR project:

- representatives of the national PRTR programs and other governmental officials;
- interested nongovernmental organizations, industry associations, companies, researchers, academics and citizens, in particular those that participate in the Consultative Group; and
- international organizations involved in PRTR-related work, e.g., OECD, UNITAR, UNEP.

## Linkages to other CEC Projects

PRTRs can serve as a valuable tool for gaining insight and tracking progress on a range of environmental issues. The CEC continues to explore opportunities for utilizing information from the matched North American PRTR data sets in the context of other CEC activities, including the sound management of chemicals, children's health and the environment, air quality, biodiversity, law and policy, the restructuring of the electricity industry, and state-of-the-environment reporting.

Responding to interests expressed by members of the PRTR Consultative Group and building on some initial scoping work done under the PRTR project, the CEC's Air Quality program has recently embarked upon the development of a criteria air contaminants inventory for North America. Given the commonalities between the PRTR work and the criteria air contaminants initiative, there will continue to be close coordination and information exchange between these two projects, including the organization of back-to-back public meetings.

The PRTR and SMOC projects are also finding increasing opportunities for linkages, particularly as the national PRTR programs add substances or lower the reporting thresholds for chemicals addressed through the SMOC program, such as dioxins/furans and mercury, thereby increasing the potential utility of PRTR as a tool for tracking progress on reducing industrial releases/transfers of these priority substances of common concern.

## Actions 2003–2004 Overview

### Annual Meeting of Consultative Group for the North American PRTR Project

The annual public meeting of the PRTR Consultative Group will be organized as a forum for obtaining stakeholder input into the further development of the *Taking Stock* series and as an opportunity for information exchange on a selected PRTR-related topic(s) of interest.

### Development and publication of *Taking Stock* reports

In 2003, the *Taking Stock* report on 2001 data will be developed and published, and planning for the 2002 data report will be initiated. The development process includes consultations with interested stakeholders in the early stages of report preparation.

### Development and publication of special feature reports

In 2003, the CEC will publish the second in the series of special feature reports and commence work on a third report (topics to be determined).

### Operation and updating of the *Taking Stock* web site

In 2003, the CEC will update the data sets in the *Taking Stock* web site, and undertake further developments to the site to improve its usability, taking into account feedback from users.

### Facilitating action to enhance the comparability of North American PRTRs

In 2003, the CEC Secretariat will continue to work with the national PRTR programs on opportunities for enhancing comparability among the national PRTRs in North America, including publication of an updated action plan.

### Promoting use, access and understanding of PRTR data

The CEC will continue to work with the Consultative Group and other relevant partners on ways to increase access to and promote the use and understanding of PRTR data/information in North America. The CEC will coordinate a joint effort among the national PRTR programs to develop chemical fact sheets designed to meet the needs of the non-technical user. A standard template will be developed and the countries will share the work of compiling the information.

### Coordination with OECD, international and hemispheric PRTR activities and general outreach

The CEC will continue to collaborate with the OECD, relevant UN bodies and other regions and countries on PRTR-related activities, and will conduct general outreach.

## Actions 2003

### 2003

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Action 1: Annual Meeting of the Consultative Group

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Action 2: *Taking Stock* data analyses and report development

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Action 3: Editing, translation, printing and distribution of *Taking Stock* reports

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Action 4: Special feature report

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Action 5: Operation, updating and further development of the *Taking Stock* web site

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Action 6: Facilitating action to enhance the comparability of North American PRTRs

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Action 7: Promoting use, access and understanding of PRTR data

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Action 8: Coordination with OECD, international and hemispheric PRTR activities and general outreach

### 2004

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The CEC anticipates continuing work in this in 2004 and will continue to explore a means of reporting on a broader set of data on North American releases and transfers.

### 3.4.1 Capacity Building for Pollution Prevention

#### Project Summary

Today, it is acknowledged around the world that pollution prevention is a strategy that has proved successful in reducing industrial pollutant loads while at the same time improving productivity and competitiveness.

The CEC has been working on several projects to promote pollution prevention measures in North American industry, including the determination of the current state of pollution prevention activities in North America, the performance of case studies to demonstrate the advantages of pollution prevention, support for the dissemination of information on pollution prevention, and the creation of sources of financing for these kinds of projects.

The purpose of this project is to complement and consolidate the initiatives undertaken to date by the CEC, by strengthening ties between the various North American stakeholders involved in pollution prevention, as well as through the consolidation of the Fund for Pollution Prevention (*Fondo de Prevención de la Contaminación—Fiprev*).

#### Objectives

The overall objective of this project is to foster introduction of pollution prevention initiatives in economic activities in North America, and to develop the necessary capacities in Mexico to spread the concept of pollution prevention taking advantage of those existing in the US and Canada.

Promote the use of pollution prevention techniques and technologies among small and medium-size Mexican industrial establishments and support them in the development of their environmental management capacities.

- Facilitate the application of pollution prevention measures in industry through the timely offering of technical assistance, information and financing for projects of this nature.
- Consolidate Mexico's Pollution Prevention Round Table.
- Strengthen the ties and joint and cooperative efforts among the pollution prevention round tables in North America.

- Strive to make Fiprev financially self-sustaining so that it can continue to finance projects to prevent pollutant generation by small and medium-size Mexican industrial establishments.

Promote mechanisms to increase the Fund's financial resources and link it with the activities of Mexico's Pollution Prevention Round Table.

#### Rationale

One of the objectives of the North American Agreement on Environmental Cooperation (NAAEC), signed in 1993 by the governments of Canada, Mexico and the United States, was to promote practices and policies for the prevention of pollution. NAAEC Article 10(2) authorizes the CEC to develop recommendations regarding pollution prevention strategies and techniques necessary for compliance with the Agreement. Nevertheless the percentage of North American companies that have established pollution prevention programs is still small. To encourage these kinds of initiatives, the mechanisms of information exchange on the subject in North America need to be strengthened, and timely technical and financial assistance must be offered to small and medium-size establishments in the region.

For this purpose, Mexico's Pollution Prevention Round Table and its ties with its counterparts in the United States and Canada have been consolidated, to take better advantage of the experience in several sectors, the establishment of synergies and the enrichment of initiatives through the creation of ties between various organizations, institutions and companies working in this area in North America. The exchange of experience among organizations, institutions and companies further facilitates the implementation of pollution prevention initiatives in the region.

The CEC, the Mexican Foundation for Innovation and Technology Transfer in Small and Medium-size Industry (*Fundación Mexicana para la Innovación y Transferencia de Tecnología en la Pequeña y Mediana Empresa—Funtec*) and the Confederation of Industry Associations (*Confederación de Cámaras Industriales—Concamin*), created Fiprev, which purpose is to implement Resolution 96-12 of the CEC Council.

## Progress to Date

In 1995, the CEC carried out a study to determine the status of pollution prevention activities in North America. The study resulted in a series of recommended actions for the three countries, taking into account their differing economic conditions and stages of development. The study concluded that the initiatives of the institutions promoting pollution prevention were well developed in Canada, reasonably developed in the United States and just beginning to be developed in Mexico. Lack of information, technology and financing are among the primary reasons why these kinds of initiatives are not carried out.

To counter this situation, the study recommended the following:

- Promote information exchange to ensure that current activities in this area are not isolated from one another.
- Institute technical support for pollution prevention.
- Create projects that can demonstrate to businesspeople the benefits of pollution prevention initiatives.
- Offer appropriate financing mechanisms for these projects.
- Implement industrial policies and practices that can stimulate companies to build relationships of productive linkages to incorporate principles of pollution prevention.

## 2002

### Estimated Resources Required (C\$)

<b>Action 1: Collaboration among the round tables on pollution prevention in North America</b>		<b>45,000</b>
Activity 1: Meetings and conference calls of the trinational group on pollution prevention policy in North America	35,000	↓
Activity 2: Participation of the three round tables in national events	10,000	
<b>Action 2: Support for the consolidation of Mexico's Pollution Prevention Round Table</b>		<b>70,000</b>
Activity 1: Strengthening Mexico's Pollution Prevention Round Table by cosponsoring its annual meeting and facilitating activities within its working groups	30,000	↓
Activity 2: Support for the creation of a regional round table on pollution prevention on the United States–Mexico border	40,000	
<b>Action 3: Fiprev follow-through</b>		<b>15,000</b>
Activity 1: Campaign to promote Fiprev among small and medium-size businesses through Funtec and Concamin; sponsor two meetings of the Fiprev technical committee, three meetings of the Fiprev Executive Commission and two meetings with potential donors. The CEC will also seek to obtain contributions to the fund from large corporations and foundations as well as to transfer CEC involvement on Fiprev to Mexico's Pollution Prevention Round Table	15,000	↓
<b>Total Resources Required</b>		<b>130,000</b>

Since then, the CEC has been carrying out various activities based on these recommendations, most of which were consolidated in 1998. The economic and environmental benefits of implementing these kinds of measures have now been demonstrated in several studies conducted by the Commission in various branches of industry.

The CEC undertook ten pilot projects (1996–1998) to demonstrate the economic and environmental benefits of pollution prevention techniques and technologies: two in the tanning industry, one in glass production, one in paint production, two in foundries, two in synthetic resin production, one in the manufacture of wire rods and one in the production of edible vegetable oils.

In September 1996, by means of Council Resolution 96-12, the CEC created a pilot fund for pollution prevention projects in small and medium-size businesses in Mexico. The CEC provided technical support to the fund administered by Funtec. Both institutions have contributed around US\$1 million to the Fiprev fund between 1996 and 2001. Additional capital will come from other organizations by means of donations approved by the Fiprev technical committee.

According to the CEC's program for 2001, 40 loans would be granted by the end of 2001. As of October 2001, 30 loans totaling approximately US\$765,000 had been granted, and 18 more for approximately US\$458,000 had been authorized. From these last, six could not be granted because of different reasons, ranging from retractions by the entrepreneurs from the use of their own resources, to plant accidents; however, the remaining are in process. Of the projects financed, 23 are in the tanning industry and the others in food, foundries, electroplating, dry cleaning, chemicals and metalwork. Currently, funding requests for many more projects are being studied, primarily in the areas of tanneries and electroplating.

As of August 2001, there has been 100 percent repayment of financing granted, amounting to around US\$263,000 in capital plus US\$110,500 in interest, as per the schedules of payments. According to the CEC's program for 2001, it is estimated that some 70,000 cubic meters of water will be saved and discharges of some 3,200 tons of chemicals will be avoided by the end of 2001. As of the end of October 2001,

it is estimated that the environmental benefits generated by the 30 projects financed to date amount to a savings of nearly 1,800 tons of chemicals not dumped into runoff waters and more than 89,500 cubic meters of water annually. This implies economic savings for the companies of around US\$805,000 each year.

The fund is administered by a technical committee, which is cochaired by Concamin's president and the CEC's executive director, with voting representatives from the Canadian and US Councils of International Business (CCIB and USCIB), and eventually, representatives from donor institutions. However, since no donor institutions have contributed yet to the fund, there are no representatives of these in the committee. This committee makes the principal decisions related to the fund.

The technical committee has created an executive commission, which is directed by the Funtec's executive director and the CEC's capacity building program head. The commission assists the technical committee in evaluating loan applications and projects, as well as supervising the fund's operation in general.

The fund is now in the process of being strengthened with a contribution of more than US\$265,000 by the Mexican Ministry of Economy. In addition, Fiprev is in the process of signing a contract with *Nacional Financiera* (Nafin) to access funds from this bank, up to US\$1 million.

The promotion of Mexico's Pollution Prevention Round Table is an effective adjunct to the activities of the CEC to further such initiatives in Mexico's production sector. Thirteen government, academic, civic and financial organizations participate on its governing board, along with around 100 representatives of various actors in Mexican society in its five working groups: policy, education and training, tools for pollution prevention, financing, and promotion. These working groups perform ongoing activities on different topics relating to pollution prevention. With the CEC's initiative and support, the round tables in Canada, Mexico and the United States are currently working together to develop a regional stance on pollution prevention policy in North America.

A trinational group, consisting of representatives of the three round tables, is being established by the round table partnership. The objective of the group is to meet periodically in order to work together in initiatives of common interest and to take advantage of the capacities of the three organizations. The group will consist of representatives of industry, academia and governments in the three countries.

## **Actions 2002**

The actions to be taken in 2002 are geared toward complementing and consolidating the pollution prevention initiatives that the CEC has taken to date. Cooperation among the North American round table organizations on pollution prevention will continue to be promoted, and the strengthening of the Mexican round table will be supported. Regarding this round table, the diversification of the organization's sources of financing will be sought, as will the establishment of regional round tables (including some on the United States–Mexico border) and partnerships among the various players in the working groups.

With support of the CEC, the trinational group on pollution prevention policy in North America will meet during the national events of the round tables in each country and will hold conference calls to advance a common project for the region. A document will be produced for presentation to the CEC Council.

The Mexican round table will be supported by cosponsoring its annual meeting, as well as by facilitating activities within its working groups.

The CEC will work with representatives from federal and state governments, industry and nongovernmental organizations to establish a pollution prevention round table for the US-Mexico border area. The initiative will seek to help coordinate, house and locate funding for a number of current activities, including environmental audits and environmental management systems, byproduct synergy and hazardous waste management strategies.

Fiprev will continue to receive follow-through and support through actions to encourage and finance pollution prevention projects in small and medium-size establishments. Another relevant action will be to undertake the necessary actions to tie Fiprev to regional efforts to establish a North American Round Table on Pollution Prevention .

## **Public Participation**

Public participation has been given ample consideration in the project, which in fact grew out of a proposal from a trinational group of experts following their analysis of a document on pollution prevention strategies. The development of case studies was facilitated by the participation of various industrial associations and businesspeople who participated in the projects. In some cases, students from local institutions of higher education also participated, providing many of the recommendations that came out of the studies.

The technical committee that governs Fiprev brings together members of the financial, academic and industrial sectors, government experts and three representatives from JPAC (one per country). Additionally, the decision-making process of the executive committee brings together representatives from various sectors, including the federal and local governments, academia, bankers and businesspeople. Information on Fiprev's activities can be obtained by accessing Funtec's web page at <[www.funtec.org.mx](http://www.funtec.org.mx)> and/or establishing contact with its staff.

By its very nature, the round table project contemplates the participation of practically all sectors of society. The round tables can be reached by their own web pages and they all act through membership mechanisms that vary in each country.



## Capacity Building

The project is completely oriented toward capacity building, both in the implementation of pollution prevention measures in small and medium-size businesses as well as through the creation of financial mechanisms to support pollution prevention actions. In addition, a new element is being incorporated at the request of the round tables on pollution prevention in Canada, Mexico and the United States, to modify regional pollution prevention policies in order to promote and facilitate the implementation of these approaches in North American production activities.

The demonstration projects have sought to involve businesspeople, company engineers, and in some cases, students from fields of study related to pollution prevention practices in order to train them in the identification, evaluation and implementation of these initiatives. In this way the project offers the opportunity for capacity building *in situ* through the principle of “learning by doing,” encouraging the ongoing practice of pollution prevention initiatives even when the consultants are no longer available.

Furthermore, the operation of Fiprev improves the capacity of Mexico to promote pollution prevention initiatives by offering competitive credits for small and medium-size industrial establishments that require financial support in order to implement initiatives of this nature.

Lastly, Mexico’s Pollution Prevention Round Table is creating and strengthening links that facilitate the flow of information necessary for the promotion and efficient implementation of prevention practices, in addition to creating joint value-added projects.

## Expected Results

The Pollution Prevention Round Table will continue to offer an increasingly ample and important forum for promoting the development, implementation and evaluation of efforts aimed at avoiding, eliminating or reducing pollution at the original source in North America, especially in Mexico. It will continue to promote dialogue and exchange of ideas among members of industry, financial institutions, the government, academia and nongovernmental organizations in order to coordinate their efforts more effectively and facilitate the attainment of their goals. In this way, it will be possible to reduce the duplication of efforts and fill the existing voids in pollution prevention activities. An additional benefit will be the spirit of cooperation generated among those involved, encouraging the dissemination of the information and facilitating the transfer of technology.

The linking of the round tables on pollution prevention of the North American countries offers the opportunity to establish informal discussions on specific themes, ongoing contacts and a mechanism to reach consensus on effective strategies for implementing pollution prevention initiatives in the region. The joint efforts of the three organizations will also lead to a regional approach to policies and strategies in the area, as well as generating consensus on specific areas concerning the effectiveness of such initiatives.

Mexico’s Pollution Prevention Round Table will increase its economic self-sufficiency, the working groups will be operating on a regular basis, and the web page will include information pertaining to pollution prevention tools and contacts. Regarding the North American Round Tables Partnership, a public declaration on cooperation among them will be formulated, the trinational group will be established and operational, and a common stand on pollution prevention for North America is intended to be presented to the CEC’s Council in June 2002. In addition, at least one regional pollution prevention round table will be established in the US-Mexico border area, an organizing committee will be made operational and an event will be held before the end of the year.

The following results and benefits are expected through the consolidation of Fiprev:

- Granting of financing to:
  - 30 additional businesses in 2002,
  - 40 more in 2003 and
  - 60 more in 2004.

These actions are expected to bring the following environmental benefits:

- Reduction of water consumption by:
  - 82,000 cubic meters during 2002,
  - 110,000 cubic meters during 2003 and
  - 164,000 cubic meters during 2004.
- Reduction of waste generation by:
  - 1,800 tons during 2002,
  - 2,400 tons during 2003 and
  - 3,600 tons during 2004.

### Expected Partners and/or Participants

Some of the partners and participants associated with this project belong to the principal organs of Fiprev—either the executive committee or the technical committee. Representatives of the following institutions participate:

#### Technical Committee:

- Concamin
- United States Council for International Business (USCIB)
- Canadian Council for International Business (CCIB)
- Funtec
- *Universidad Nacional Autónoma de México*
- World Environmental Center

#### Executive Committee:

- *Instituto Politécnico Nacional*
- *Nacional Financiera* (Nafin)
- National Institute of Ecology  
(*Instituto Nacional de Ecología*—INE)
- National Bank of Foreign Trade  
(*Banco Nacional de Comercio Exterior*)

The Governing Board of Mexico's Pollution Prevention Round Table has the participation of the Mexican Center for Cleaner Production, the *Instituto Tecnológico y de Estudios Superiores de Monterrey*, the *Universidad de Guadalajara*, INE, the Federal Attorney General for Environmental Protection (*Procuraduría Federal de Protección al Ambiente*—Profepa), the Governments of Guanajuato and Querétaro, the Mexican Federation of Sanitary and Environmental Engineering, Nafin, Concamin, the *Instituto Autónomo de Investigaciones Ecológicas* and the Innova Center for Sustainable Development.

The US National Pollution Prevention Round table and the Canadian Pollution Prevention Round Table also are included.

### Linkages to other CEC Projects

Reduction on emissions of toxic substances such as lead in productive processes is the best way to lower risks to human health and the environment. In this way the actions considered in the children's health and the environment in North America program as well as those in the sound management of chemicals are designed considering preventative approaches such as pollution prevention. In addition, pollution prevention can improve air quality through the introduction of best available technologies.

### 3.5.1 Children's Health and the Environment in North America

#### Project Summary

This project facilitates collaboration among the Parties and with interested stakeholder groups to address environmental threats to children's health, including the effects of toxic substances, impacts of poor air quality and other environmental health issues of common concern. An important focus of the work is to contribute to a better understanding of the interrelationships between environmental quality and the health of children, with a view to providing a foundation for informed decision-making at all levels, including government policy makers, health and environmental professionals, parents and others concerned with the health and well being of North American children and future generations.

#### Goals and Objectives

The goal of the CEC's involvement in this area is to work with the Parties in developing a long-term cooperative agenda to protect children from environmental threats to their health, with the overall objective of reducing human-caused pressures on children's health.

Specific objectives include:

- involving the Expert Advisory Board, the public and interested stakeholder groups in the development of a North American cooperative agenda for children's health and the environment, and fostering collaborative efforts to implement elements of the agenda;
- focusing in particular on priority issues identified by Council including asthma and other respiratory diseases, the effects of lead, including lead poisoning, and the effects of exposure to other toxic substances;
- tracking progress through the development and use of a core set of children's environmental health indicators for North America;

- promoting a more integrated look at the interactions between environment and health as a basis for sound decision-making, through better information and by fostering increased interaction between agencies and organizations working on children's health issues and those involved in environmental protection efforts;
- gaining a better understanding of the economic and societal costs of health problems in children that are linked to degraded environmental quality, as well as cost-effective actions to solve such problems, with a particular focus on asthma and other respiratory disease and the effects of exposure to lead and other toxic substances;
- initiating activities to increase parents' and the public's awareness and education about environmental threats to children's health and ways of preventing exposure to those threats; and
- incorporating the protection of children and other vulnerable groups as an objective within key work areas of the CEC, in particular the sound management of chemicals and air quality programs.

The project will also provide useful groundwork for trilateral efforts to address environmental threats such as pesticide exposure to the health and well being of other vulnerable groups in North America.

#### Rationale

The impact of environmental hazards on children's health is receiving increasing attention among scientists, policymakers and the public alike in all three North American countries. In Resolution 00-10, Council recognized that there is a growing body of scientific evidence that children are particularly vulnerable to many environmental contaminants. They endorsed the ideals affirmed in the 1997 Declaration of the Environmental Leaders of the Eight on Children's Environmental Health as well as Chapter 25 of Agenda 21 of the United Nations Conference on Environment and Development.

Ensuring a safe environment for children requires action at all levels: locally, nationally, regionally, and even globally. Given its unique position as a regional body focused on environmental issues, the CEC has the opportunity to play an important role in advancing issues related to children's health and the environment on a North American scale. This CEC project can contribute by: (1) facilitating and promoting the efforts of the broad range of actors that have a role to play in children's health and the environment in North America,(2) developing the North American cooperative agenda for children's health and the environment, and (3) by undertaking actions within the scope of the CEC work program.

### **Progress to Date**

Recognizing the need for greater coordination and cooperation to protect children from environmental threats in North America, in June 1999 the CEC Council announced a special initiative to explore opportunities for CEC involvement in this area. The Symposium on Children's Health and the Environment in North America, held in May 2000 in Toronto, and the follow-up government meeting, were important first steps in the process of identifying a common agenda for action among the three countries. The outcomes of the symposium and government meeting provided important groundwork for Council Resolution 00-10 on Children's Health and the Environment, which was adopted by the CEC Council during its session in Dallas, Texas, in June 2000.

In its Resolution, Council recognized that children can be particularly vulnerable to many environmental hazards in the air they breathe, the water they drink, the food they eat and the environments in which they live, learn and play, and that prevention is the most effective means of protecting children. The Council also affirmed that parents have a right to know about the presence of potentially harmful substances that may affect the health of their children. The Resolution commits the Parties to work together as partners to develop a cooperative agenda to protect children from environmental threats, with an initial focus on specific environmentally-related impairments to good health, such as asthma and other

respiratory diseases, the effects of lead, including lead poisoning, and the effects of exposure to other toxic substances. The Resolution also called for the formation of an Expert Advisory Board to provide advice to Council on matters of children's health and the environment.

Following the June 2000 Council Session, a Trilateral Children's Environmental Health (CEH) Team was formed to advance implementation of Council Resolution 00-10. In 2000-01 the CEH Team coordinated the compilation of inventories of national, bilateral and trilateral activities related to children's health and the environment as a basis for identifying gaps and opportunities for collaboration and for sharing of best practices and lessons learned. The project also provided support for the organization of a successful national workshop on children's health and the environment in Mexico, which was jointly convened by Semarnat and the Ministry of Health and which set the groundwork for a national children's environmental health agenda in Mexico. Initial steps were taken to identify user needs and possible options for a CEC web site on children's health and the environment. A trilateral workshop to further develop the North American cooperative agenda on children's health and the environment was held in November 2001.

At the June 2001 Council Session, the CEC Council issued Resolution 01-04 in which the ministers reiterated their commitment to working together to address environmental threats to children's health, welcomed the role of the Expert Advisory Board in this regard, and adopted terms of reference for the Board. The Council also indicated its interest in building on the children's environmental health initiative in order to address environmental threats such as pesticide exposure to the health of other vulnerable groups. The Expert Advisory Board was formed in October 2001, and held its first meeting in late November 2001 in Montreal.

## **Actions 2002 Overview**

### **Support for Expert Advisory Board**

The Expert Advisory Board, which is composed of three highly qualified individuals from each country, has been established for a period of two years to provide advice to Council on matters concerning children's health and the environment. The project will provide for periodic teleconferences and consultant support for the work of the Expert Advisory Board, and at least two meetings in 2002 including the participation of Board members in CEC events related to children's health and the environment.

### **Reducing children's exposures to lead through pollution prevention**

The use of lead in certain micro-industries in Mexico has been identified as a priority issue due to concerns about local environmental contamination as well as potential exposures via goods traded in commerce. Use of lead by micro enterprises and cottage industries is also a concern in parts of Canada and the United States. Lead is a substance of particular concern to the health of children. The project will explore the development of a financing program to assist micro-facilities in selected industries (e.g., pottery/ceramics, battery recycling, lead shot and sinkers) to reduce/avoid the use of lead through implementation of pollution prevention measures, as a means of reducing potential lead exposures among children via the local environment and/or products. This will include seeking relevant partnerships, identifying opportunities for technology transfer and outreach, and assessing the feasibility of using the Fiprev revolving loan mechanism or other existing mechanisms. (For a description of the Fiprev program, see project 3.4.1, Capacity Building for Pollution Prevention.)

### **Developing and tracking key indicators of children's environmental health**

Building on work done by the national governments and other institutions, and working in partnership with the health professionals task force of the International Joint Commission, the Pan American Health Organization and the World Health Organization, the CEC will facilitate the development of a core set of children's environmental health indicators for North America. Once developed, the indicators will be published on a periodic basis as a means of tracking progress towards the goal of improved protection of children from environmental threats. The focus in 2002 will be to complete the feasibility study, develop a work plan and initiate its implementation.

### **Fostering improved decision-making for children's environmental health**

In making regulatory/policy decisions relevant to the protection of children's health from environmental threats, there are a number of factors that come into play, including estimates of risk, economic costs and benefits, and social considerations. In 2002, three actions will be undertaken aimed at fostering improved decision-making for children's environmental health: (1) Recognizing the importance of good information as a basis for sound decision-making, including data on children's exposures and health outcomes, the CEC will facilitate collaboration among researchers in the three countries involved in the development of longitudinal cohort studies on children's exposures to environmental contaminants, taking into account the work that has been initiated in the United States and Canada. (2) The CEH Team, in consultation with the SMOC working group and other relevant actors, will explore options for exchanging best practices and promoting improved decision-making for children's environmental health, including the application and role of tools such as risk assessment and economic analyses. (3) The project will identify and compile information on the economic implications of health problems in children linked to degraded environmental quality, with a particular focus on estimating the health care and other societal/economic costs of asthma and other respiratory disease and the effects of exposure to lead and other toxic substances.

**Facilitating scientific information exchange, increasing public awareness, and networking with other institutions**

Council Resolution 00-01 called for increased sharing of scientific and research information and for the promotion of education and awareness among parents and the general public on environmental threats to children's health. In 2002, the CEC will continue its efforts to foster information exchange and raise public awareness through the CEC web site and other communication tools and through targeted outreach efforts. The CEC will also build collaboration and linkages with other groups, including the NAFTA Technical Working Group on Pesticides and international organizations such as the Pan American Health Organization (PAHO) and the World Health Organization (WHO).

**Public Participation**

In May 2000, the CEC hosted the Symposium on North American Children's Health and the Environment to provide for public input to the initial planning of a project in this area. The Secretariat and the Trilateral Children's Environmental Health Team will continue efforts to ensure public and stakeholder consideration and feedback as the Parties develop and implement the cooperative agenda for children's health and the environment. The Expert Advisory Board also has an important role to play in bringing outside perspectives and expertise into the work of the CEC in this area. The draft Cooperative Agenda for Children's Health and the Environment in North America, developed by the three countries through the trilateral governmental workshop held in Montreal in November 2001, will be circulated for public input in early 2002. Planning is also underway for a joint public meeting of the JPAC and the Expert Advisory Board on Children's Health and the Environment in March 2002.

**2002**

**Estimated Resources Required (C\$)**

Action 1: Support for Expert Advisory Board		40,000
Action 2: Reducing children's exposures to lead through pollution prevention		35,000
Action 3: Developing and tracking key indicators of children's environmental health in North America : Preparation of feasibility study and project plan		32,000
Action 4: Fostering improved decision-making for children's environmental health		38,000
Activity 1: Facilitating trilateral collaboration on longitudinal cohort studies	13,000	↓
Activity 2: Exploring options for exchanging experiences, best practices on the use of decision-making tools	5,000	
Activity 3: Assessing economic implications of environmental impacts on children's health: asthma/respiratory disease and exposure to lead and other toxic substances	20,000	
Action 5: Facilitating scientific information exchange, increasing public awareness, and networking with other institutions		18,000
<b>Total Resources Required</b>		<b>163,000</b>

## Capacity Building

The project is expected to contribute to improvements in the protection of children's health from environmental threats by creating a forum in which the three countries can benefit from and build upon each others' experience and expertise. The collaboration on the longitudinal cohort studies and the collaborative work on indicators are two areas in which this type of mutually beneficial exchange will take place. The activity to reduce children's exposure to lead in Mexico, once in the implementation phase, will help build capacities among selected micro-industries to reduce or avoid the use of lead in their products and processes.

## Expected Results

Through development of a cooperative agenda, the project will help raise the profile of children's environmental health issues in North America and foster collaboration among the Parties and other relevant groups to tackle issues of common concern. The project will also contribute to networking and information sharing among those involved in environmental and health protection efforts in North America, both within and outside of government. Groundwork will also be laid for medium- to long-term efforts to improve the availability and comparability of information/data on environmental threats to children's health and their impacts.

Specific expected results include:

- development of a project in Mexico to reduce children's exposures to lead in the local environment and via goods traded in commerce;
- feasibility study and project plan on the development of children's environmental health indicators for North America;
- increased collaboration among researchers in the three countries on the development of longitudinal cohort studies on children's environmental exposures and impacts;
- compilation of selected information on the economic implications of health problems in children linked to degraded environmental quality;
- exchange of information among the three countries on cost-effective options for addressing selected children's environmental health issues;
- a plan for collaborative work to improve decision-making for children's environmental health, possibly including a pilot project on decision-making in Mexico;
- increased involvement of stakeholder groups and the interested public in the CEC initiative on children's health and the environment; and
- strategic partnerships/cooperation with other institutions including the IJC Health Professionals Task Force, PAHO and WHO.

## Expected Partners and/or Participants

The Council noted that governments, individuals, communities, industry, and nongovernmental environmental and health groups all have important roles to play in addressing children's health issues. In 2002, the Trilateral Children's Environmental Health Team will continue to work with the Secretariat and Expert Advisory Board to explore linkages and partnerships with other groups and institutions, in the context of the cooperative agenda and other project activities.

## Linkages to other CEC Projects

The CEC will continue to pursue opportunities to advance the protection of children's health through other areas of the CEC work program. Specific linkages exist in the following programs/projects:

- Sound Management of Chemicals (SMOC): incorporation of a children's health perspective into the North American Regional Action Plans on specific toxic substances, in particular the NARAPs on mercury and on monitoring and assessment; possible collaboration, as appropriate, on work aimed at reducing lead use among micro-industries;
- Air Quality: assesment of the impacts of degraded air quality at congested border crossings on the health of children and other vulnerable groups;
- Pollution Prevention Capacity Building: possible collaboration on work aimed at reducing lead use among micro-industries in Mexico through pollution prevention measures.
- Pollutant Release and Transfer Register (PRTR): special feature on toxic pollutants and children's health to be published in early 2002; tracking of carcinogens and other chemicals of concern through the annual *Taking Stock* series on pollutant releases and transfers from industrial sources.

## **Actions 2003–2004 Overview**

### **Support for Expert Advisory Board**

The project will provide support for the work of the Expert Advisory Board, including meetings, teleconferences, consultant support and the participation of Board members in CEC events related to children's health and the environment.

### **Reducing children's exposures to lead through pollution prevention in Mexico**

In 2003, the CEC will continue implementation of the project aimed at reducing lead use among micro-industries in Mexico through pollution prevention measures, taking into account the results of project activities in 2002. If appropriate, the CEC will continue to seek additional funding partners for this program in order to enable broader participation and a greater impact.

## **Actions 2003–2004**

### **2003**

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Action 1: Support for Expert Advisory Board

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Action 2: Reducing children's exposures to lead through pollution prevention in Mexico

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Action 3: Tracking key indicators of children's environmental health

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Action 4: Improving the availability, use and comparability of data on the effects of environmental exposures on children's health in North America

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Action 5: Fostering improved decision-making for children's environmental health

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Action 6: Facilitating scientific information exchange, increasing public awareness, and networking

### **2004**

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Action 1: Support for Expert Advisory Board

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Action 2: Tracking key indicators of children's environmental health

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Action 3: Improving the availability, use and comparability of data on the effects of environmental exposures on children's health in North America

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Action 4: Fostering improved decision-making for children's environmental health

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Action 5: Facilitating scientific information exchange, increasing public awareness, and networking

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Action 6: Assessing progress and further development of the cooperative agenda



### **Tracking key indicators of children's environmental health**

The CEC, in collaboration with its partners, will compile and periodically publish a core set of children's environmental health indicators for North America as a means of tracking progress towards the goal of improved protection of children from environmental threats.

### **Improving the availability, use and comparability of data on the effects of environmental exposures on children's health in North America**

The CEC will continue efforts to improve the availability, use and comparability of data related to children's environmental health building on activities initiated in 2002, including facilitating collaboration among the three countries with respect to longitudinal cohort studies on children's exposures to environmental contaminants.

### **Fostering improved decision-making for children's environmental health**

In 2003, the project will implement activities planned in 2002 related to improving decision-making for children's environmental health, potentially to include a pilot project in Mexico and/or a workshop.

### **Facilitating scientific information exchange, increasing public awareness, and networking with other institutions**

The CEC will continue efforts to raise awareness, facilitate public access to information, foster scientific information exchange and coordinate activities with other relevant groups and institutions.

### **Assessing progress and further development of the cooperative agenda**

In 2004, the CEC will assess progress to date in the implementation of the cooperative agenda on children's health and the environment in North America, possibly including the organization of a public workshop to review results and obtain stakeholder input on the further development of the cooperative agenda and next steps.



## LAW AND POLICY

### Goal

The goal of the Law and Policy program area is to address regional priorities regarding obligations and commitments in NAAEC related to enhancing compliance with, and enforcement of, environmental laws and regulations, environmental standards, environmental performance and the continued development and improvement of environmental law and policy. Program initiatives monitor and report on regional trends in implementing and enforcing environmental laws and standards, including innovations in regulation, economic instruments and voluntary initiatives.

## Program Initiatives

In order to accomplish this goal, work in this area is divided into three program initiatives. The first, Environmental Standards and Performance, focuses on NAAEC objectives of strengthening regional cooperation in the development and improvement of environmental laws and regulations. This initiative is created to strengthen cooperation on the development and continued improvement of environmental technical requirements and standards by promoting exchange of information and sharing best practices.

The second program, Enforcement Cooperation, responds directly to the Parties' obligations for the effective enforcement of their respective environmental laws and regulations. In response to the Council mandate to ensure regional cooperation in enforcement, the program supports a regional forum of senior enforcement officials. It also addresses alternative approaches to effective enforcement and private access to remedies.

The third program, Environmental Policy, examines leading-edge policy initiatives in priority areas and shares best practices among public and private sectors.

## Environmental Standards and Performance

- Comparative Report on Environmental Standards
- Environmentally Sound Management of Hazardous Waste

## Enforcement Cooperation

- North American Regional Enforcement Issues
- Enforcement and Compliance Capacity Building
- Enforcement/Compliance Reporting

## Environmental Policy

- Sustainable Use and Conservation of Freshwater in North America

## 4.1.1 Comparative Report on Environmental Standards

### Project Summary

The CEC will complete and disseminate a comparative study of North American laws and policies relating to intensive agriculture practices. This report will form the basis for identifying best practices and to provide federal, state, provincial and local authorities with approaches employed by other jurisdictions.

### Goals and Objectives

The goal of this project is to strengthen cooperation on the development and continued improvement of environmental technical requirements and standards by promoting exchange of information and sharing best practices.

The objectives of this project are to:

- share best practices and approaches and identify regulatory gaps,
- prepare a comparative analysis of existing environmental standards in an area of focus for all three NAFTA Parties and
- establish a baseline of regulatory practice from which to evaluate changes and trends in the future.

### Rationale

This project responds to requests from the public that the CEC work on enhancing cooperation in the development of compatible environmental standards as well as promoting a better understanding of standard-setting processes in the three countries. It also fulfills a number of certain NAAEC objectives, which include strengthening cooperation in the development and improvement of environmental laws and regulations, as well as of compatibility of technical standards, including those of the private sector. While NAAEC Article 3 recognizes the right of each of the Parties to establish its own level of domestic environmental protection and environmental development policies and priorities, each Party is also obligated to ensure that its laws and regulations provide for high levels of environmental protection and to strive to continue to improve those laws and regulations. The Council is committed under Article 10(3) to strengthen cooperation on the development and continued improvement of environmental laws and regulations by promoting

the exchange of information on criteria and methodologies used in establishing domestic environmental standards and, without reducing levels of environmental protection, by establishing a process for developing greater compatibility of environmental technical regulations, standards and conformity assessment procedures in a manner consistent with NAFTA. The project is also tied to *A Shared Agenda for Action*, which encourages an analysis of trends in each country's performance and information-sharing in the area of environmental standards.

The CEC study on intensive agriculture that commenced in 2001 was developed during an initial scoping exercise and identified in the last work plan. Surface and ground water pollution from large confined animal facilities has led to increased government and public scrutiny of existing controls for animal wastes. This issue is perceived as a serious environmental and human health threat. The trend towards increased concentration of intensive livestock operations makes an examination of this issue timely in a rapidly evolving regulatory context. Sharing regulatory approaches with affected jurisdictions will help diffuse best practices and identify regulatory gaps.

### Progress to Date

After receiving the preliminary scoping work carried out by consultants from each of the NAFTA countries, the CEC chose intensive agriculture practices as an area of critical importance in all three countries because of its effects on air, water and soil (particularly nitrate and phosphate loading).

There is currently a great deal of activity in regulatory agencies at the state and federal levels in North America as evidenced by the current spate of hearing and regulatory change taking place, particularly in the United States and Canada. Experts in Canada, Mexico and the United States are carrying out research to provide a comparative overview of the regimes in place (of a regulatory and guidance nature) and highlight current trends. The study will provide a baseline report on how environmental and human health concerns are addressed by selected regulatory authorities in this area.

## Actions 2002 Overview

### Public Participation

Targeted outreach on the intensive agriculture report will involve local, state, provincial and federal regulatory experts from agriculture, health and environment sectors, as well as key continental experts.

### Expected Results

The comparative study will produce a clear overview and baseline of existing regional standards in this area. They lay the groundwork for identifying best practices, as well as the potential for developing greater compatibility of environmental standards within the respective sovereign regulatory frameworks of each NAFTA Party.

### Expected Partners and/or Participants

The study anticipates the collaboration of the appropriate government agencies of each country as well as the necessary experts or centers of excellence both within and outside of government. The CEC is currently collaborating with the US Department of Agriculture, University of Saskatchewan, Tulane University, *Universidad Nacional Autónoma de México* (UNAM) and others.

### Linkages to other CEC Projects

The comparative study on intensive livestock operations picks up on one of the trends identified in project work carried out by the Environment, Economy and Trade program area.

## 2002

### Estimated Resources Required (C\$)

<b>Action 1: Intensive Agriculture Standards</b>		<b>90,000</b>
Activity 1: Finalize comparative report on intensive agriculture standards (including government and peer review, editing, translation and printing)	50,000	
Activity 2: Convene workshops of selected stakeholders from relevant regions to present the report and share best practices and approaches	40,000	
<b>Total Resources Required</b>		<b>90,000</b>

## Actions 2003

### Action 1: Intensive Agriculture Standards

- Activity 1: Convene workshop of government and other experts to review the findings of the comparative report on intensive agriculture standards
- Activity 2: Prepare a report to Council on the findings/recommendations arising from the workshop (includes translation, editing and publication)

## 4.1.2 Environmentally Sound Management of Hazardous Waste

### Project Summary

At the eighth Regular Session of Council, held in Guadalajara in June 2001, Council members agreed to initiate work in the area of Environmentally Sound Management of Hazardous Waste, recognizing the serious environmental and human health consequences of improper tracking and disposal.

### Progress to Date

In 1998, the CEC initiated work on hazardous waste issues by publishing, in 1999, a report entitled *Tracking and Enforcement of Transborder Hazardous Waste Shipments in North America*. The Parties reviewed the findings of the report and identified future areas of work. This project will build on those efforts and in current bilateral agreements between Canada and the US and between the US and Mexico.

### Actions 2002 Overview

The proposed project will have two main actions, one dedicated to the Environmentally Sound Management of Hazardous waste by analyzing major policies and regulations, and the second action will focus on the tracking of transborder shipments of hazardous wastes.

The first year, this project will produce two reports:

- A North American approach to Environmentally Sound Management (ESM) of Hazardous Waste, that will identify elements and make recommendations on how to initiate a trilateral ESM program, as well as lay groundwork for capacity building.
- Business model of information related to transboundary movement of hazardous waste. This report will identify opportunities for trilateral collaboration.

In addition, the project will seek improvement on the transboundary tracking of hazardous waste by implementing some of the recommendations from the second report.

### Expected Partners and/or Participants

The first year of the project will focus on policy and technical issues, where government experts from the protection agencies and customs will be involved. In addition, as the initial work translates into recommendation and actions, state/provincial and local level officials need to be consulted and participate, as well as technical experts in ESM and capacity building.

### Public Participation

The task force meetings will have at least one public workshop to discuss options and alternatives with the public.

### Linkages to other CEC Projects

This project builds upon the work of the Enforcement Work Group. In addition, it is expected that some of the technical experts that will participate in the meetings and workshops will include members of other CEC projects, such as SMOC, Transportation Corridors, and Pollution Prevention.

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**Action 1: Environmentally Sound Management (ESM) of Hazardous Waste** 137,000

A task force of government officials will be convened to provide guidance and implement activities to address the differences in legislation, regulations and major policies in North America

Activity 1: Task force members will develop a clear framework for a general analysis of the three countries, comparing their hazardous waste requirements and identifying differences in legislation, regulations and major policies. This framework should include: defining the scope and direction of the task force activities; establishing criteria to guide the preparation of the analysis; identifying desired outcomes	15,000
Activity 2: Task force members will assist in the development of a general analysis of the three countries, comparing their hazardous waste requirements and identifying differences	30,000
Activity 3: Convene a meeting of the task force to identify and agree on several priority areas for more specific comparative analysis. Review the general comparative analysis and elaborate on these priority areas as much as possible. The task force and the Secretariat will follow up with a focused analysis, narrowing down actions for follow-up work	20,000
Activity 4: Report to the CEC Council on the preliminary results of the analysis and anticipated next steps	2,000
Activity 5: The task force will finalize the report, combining the general and specific analyses	10,000
Activity 6: Convene a task force meeting with technical experts to: (1) based on the above comparisons of requirements, identify elements which could usefully be included in a North American ESM approach; (2) based on the identified elements, make recommendations on ways to improve the environmentally sound management of hazardous waste in North America; and (3) discuss goals and lay groundwork for ESM capacity building. The meeting will include nongovernmental stakeholders, state and provincial officials. Preceding the task force meeting, there will be a workshop with key expert speakers to better inform the development of recommendations on ways to improve environmentally sound management of hazardous waste in North America	60,000

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**Action 2: Transborder Movement of Hazardous Waste** 70,000

The task force will follow up to the 1999 report entitled *Tracking and Enforcement of Transborder Hazardous Waste Shipments in North America*

Activity 1: Create a report containing a business model of information-related transactions and diagnosis of operations/procedures involved in shipping hazardous waste between Canada, US and Mexico. The business model will document the information-related requirements, operations/procedures/processes, of the current systems involved with hazardous waste import/exports between the North American countries.	30,000
Activity 2: Convene a task force meeting with government experts to: (1) provide comments on the report; (2) to make recommendations on how the current paper-based series of transactions for transborder shipments of hazardous waste can be automated and improved to help ensure better compliance	20,000
Activity 3: Follow up and implement recommendations from Activity 2	20,000

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**Total Resources Required** 207,000



## Actions 2003–2004

### 2003

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#### Action 1: Environmentally Sound Management of Hazardous Waste

Activity 1: Prepare a well-developed substantive paper on the North American approach to ESM

Activity 2: Convene a meeting of the task force and policy and technical experts on capacity building to: (1) identify useful areas for capacity building; and (2) make recommendations on capacity building needs; (3) agree on the major elements of a capacity building program and begin developing methods for implementing this program. The meeting will include appropriate government experts on capacity building as well as nongovernmental stakeholders, state and provincial officials. Preceding this task force meeting, hold a workshop devoted to identifying successful techniques for ESM capacity building

Activity 3: Report to the CEC Council on the substantive ESM paper and on initial proposals for ESM capacity building

Activity 4: Develop a report with concrete recommendations and implementation steps for North America capacity building

Activity 5: Coordinate with the OECD ESM effort as appropriate since the NAFTA countries are OECD members and there are likely to be some links between the CEC and OECD ESM efforts. Also, coordinate with ESM efforts in other international fora (e.g., UNCTAD, Basel Convention), as appropriate.

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#### Action 2: Transborder Movement of Hazardous Waste

Activity 1: Continue implementation of recommendations

### 2004

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#### Action 1: Environmentally Sound Management of Hazardous Waste

Activity 1: Reach agreement on which elements will be included in the North American ESM system and begin pilot implementation of that system

Activity 2: Begin pilot implementation of a few of the recommendations for capacity building

Activity 3: Report to Council providing recommendations on a North American approach to ESM and discuss ESM capacity building successes

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#### Action 2: Transborder Movement of Hazardous Waste

Activity 1: Evaluate progress and decide on future work

## 4.2.1 North American Regional Enforcement Issues

### Project Summary

The Enforcement Cooperation program provides ongoing support to the North American Working Group on Enforcement and Compliance Cooperation (EWG) in examining issues related to shared enforcement and compliance challenges. In 2002 there will be two areas examined: i) effective enforcement and enhanced compliance in the area of hazardous waste; and ii) tracking and enforcement issues related to the transboundary movement of mercury for processing or final disposal. For the first area, the EWG will establish a new task force of federal, state and provincial agencies to work on recommendations arising out of its 1999 report: *Tracking and Enforcement of Transborder Hazardous Waste Shipments in North America*, and will provide guidance to project 4.1.2. Environmentally Sound Management of Hazardous Waste. For the second area, the EWG will work with the Sound Management of Chemicals (SMOC) Mercury Task Force.

### Goals and Objectives

This project supports the EWG in carrying out its mandate to enhance cooperation among the Parties in environmental enforcement and compliance. Over the next two years, the project will:

- Support and provide direction to the environmentally sound management of hazardous waste proposal.
- Assist the SMOC Mercury Task Force in implementing Phase II of the North American Regional Action Plan for mercury.

### Rationale

This program area responds directly to the Parties' NAAEC Article 5 obligation of effective enforcement and the Council's NAAEC Article 10(4) obligation to foster technical cooperation to this end. Cooperative work on regulatory enforcement issues is carried out with the collaboration and guidance of the North American Working Group on Environmental Enforcement and Compliance Cooperation (EWG). The EWG was established under Council Resolution 96-06, and is composed of senior-level environmental enforcement officials appointed by the Parties. It is mandated by the Council Resolution to:

- take action to strengthen cooperation among the Parties in environmental enforcement and compliance;
- enhance cooperation among the environmental enforcement agencies in recognition of shared enforcement and compliance challenges;
- facilitate and support cooperative enforcement and compliance initiatives;
- exchange information and experiences with alternative approaches to enforcement and compliance;
- facilitate training opportunities among the three Parties;
- prepare on behalf of the Parties the report on environmental enforcement obligations and activities for the CEC annual report; and
- recommend to CEC program priorities relating to environmental enforcement and compliance.

The EWG also includes in its membership the North American Wildlife Enforcement Group (NAWEG), a regional network of wildlife enforcement officials.

## Progress to Date

Since 1995, the CEC has provided support for meetings and communications among the members of the EWG, NAWEG and related task groups. Meetings of the EWG and NAWEG have been coordinated to also enable their effective participation in the development and delivery of the Enforcement Cooperation program. The networks have spawned a series of additional task groups initiating cooperative work on issues of priority regional concern, including transboundary hazardous waste, environmental management systems (EMSs) and other voluntary approaches to compliance, and enforcement of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Since 1996, the EWG has identified the need for cooperation in improving the capacity to track and enforce laws regulating the transborder movement of hazardous wastes and CFCs. In 1999, the CEC published a needs assessment report for the tracking and enforcement of transborder hazardous waste shipments in North America as background for a trilateral meeting of hazardous waste enforcement officials. The product was a Regional Action Plan for: exchanging tracking databases and compliance data; enhanced capacity to gather, utilize and exchange intelligence; improved compatibility in tracking systems; conducting training in intelligence-gathering, regional law and policy, safety, emergency response, and spill response; and improved understanding the nature of the regional illegal trade and the key players involved.

With regard to the mandate to enhance cooperation among environmental enforcement agencies, the Enforcement Cooperation program aims to ensure continuity of these cooperative regional enforcement efforts. Both the EWG and NAWEG are becoming widely recognized as model regional enforcement networks. They also provide a ready point of contact for enforcement agencies and entities worldwide,

including Interpol, the World Customs Organization, the International Network on Environmental Compliance and Enforcement (INECE) and other regional enforcement networks. NAWEG provides advice and assistance to the Trilateral Committee for Wildlife and Ecosystem Conservation and Management. As a regional forum, NAWEG has enabled the agencies to identify critical actions needed to improve North American capacity to detect and enforce wildlife laws, including the need for a regional wildlife forensics network.

In February 2002 the Environmental Enforcement Working Group will meet in Montreal to discuss, among other things, national efforts to promote the CEC Environmental Management System Guidance as well as explore further opportunities for comparability and mutual recognition in this area.

## Actions 2002 Overview

Mechanisms will be explored to allow for public involvement in the selection of priority enforcement matters meriting regional attention. In the planning and delivery of specific regional enforcement initiatives, attention will be placed on involving the interested public, including NGOs, industry, academics, and other groups where appropriate.

## Capacity Building

One of the direct benefits of CEC support to the regional enforcement networks has been the immediate enhanced capacity of the Parties' environmental and wildlife enforcement agencies to work cooperatively in meeting the obligation of effective enforcement. The working groups, particularly NAWEG, have spawned a number of joint initiatives directed at enhanced field capacity to track and enforce environmental and wildlife laws. For full description on capacity building efforts see project 4.2.2.

## Expected Results

This part of the Enforcement Cooperation program has two aspects: The first is the promotion of regional enforcement cooperation among enforcement agencies. The project will provide continued support to regional networks in furtherance of their mandates for regional cooperation in effective environmental enforcement. These networks provide the forum to develop a North American perspective on enforcement issues of particular relevance internationally and enable the supervision of the work carried out by the various task forces on regional enforcement issues. The North American Wildlife Enforcement Group (NAWEG) has been recognized as the North American regional link to the Interpol Wildlife Crimes Subgroup. Similar linkages have been

made with the World Customs Organization (WCO). Both the EWG and the NAWEG participate with other enforcement networks, including the International Network on Environmental Compliance and Enforcement (INECE).

The second aspect concentrates on specific regional enforcement issues. The EWG will bring together North American experts on hazardous waste to update the needs assessment on transboundary movement of hazardous waste under project 4.1.2 and will assist the SMOC Mercury Task Force in the implementation of aspects of Phase II of the mercury NARAP.

## 2002

### Estimated Resources Required (C\$)

<b>Action 1: Regional Enforcement Network</b>		<b>45,000</b>
Activity 1: Organize adjunct meetings of EWG to provide guidance on Enforcement Cooperation program	<i>25,000</i>	↓
Activity 2: Organize adjunct meetings of NAWEG to discuss outreach and capacity building activities	<i>5,000</i>	
Activity 3: Foster an interagency exchange of information, regional priority-setting, and strategy for enforcement of and compliance with environmental laws	<i>10,000</i>	
Activity 4: Further outreach to other regional and international networks; EWG outreach to provincial/state agencies; NAWEG outreach to other agencies (marine, parks, including state/provincial agencies) as well as Interpol and World Customs Organization	<i>5,000</i>	
Activity 5: Foster an exchange of information, under the auspices of the EWG, on Parties activities related to follow up and implementation of the EMS Guidance Document, and prepare a report for Council review and follow up, as appropriate		
<b>Action 2: North American Regional Action Plan on Mercury</b>		<b>18,000</b>
Activity 1: Form task force of enforcement experts to advise regarding the transboundary tracking mechanisms for mercury	<i>3,000</i>	↓
Activity 2: Finalize a study in conjunction with SMOC on the tracking and reporting mechanisms for transboundary mercury shipments	<i>10,000</i>	
Activity 3: Undertake a further analysis of gaps and barriers in areas such as adequate reporting systems to track cross border movement of mercury and/or differences in regulatory approaches for mercury disposal	<i>5,000</i>	
<b>Total Resources Required</b>		<b>63,000</b>

## Expected Partners and/or Participants

The project will continue to be delivered in partnership with North American environmental and wildlife agencies. Efforts will be focused on outreach to expand the North American enforcement network to other related agencies, including state- and provincial-level agencies that are exploring their priority issues and needs for ensuring effective enforcement. The CEC will continue to deliver the project in partnership with the North American Wildlife Enforcement Group and the Enforcement Working Group. Partnerships will continue to be explored with other regional enforcement networks and related international organizations, such as INECE and Interpol, and with other relevant individuals and organizations.

## Linkages to other CEC Projects

The work of all CEC projects in the Enforcement Cooperation program is conducted under the guidance of the EWG. There are ongoing linkages with the Phase II Task Force on the North American Regional Action Plan on mercury.

## Actions 2003–2004

### 2003

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#### Action 1: Regional Enforcement Network

Activity 1: Organize adjunct meetings of EWG to provide guidance on Enforcement Cooperation program

Activity 2: Foster an interagency exchange of information, regional priority-setting, and strategy for enforcement of and compliance with environmental laws

Activity 3: Further outreach to other regional and international networks; EWG outreach to provincial/state agencies; NAWEG outreach to other agencies (marine, parks, including state/provincial agencies) as well as Interpol and World Customs Organization

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#### Action 2: North American Regional Action Plan on Mercury

Activity 1: Hold workshop on results of study regarding the transboundary tracking mechanisms for mercury

Activity 2: Prepare report to Council on tracking and reporting mechanisms for transboundary mercury shipments

### 2004

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CEC anticipates continuing work in this area in 2004.

## 4.2.2 Enforcement and Compliance Capacity Building

### Project Summary

This ongoing project supports initiatives to enhance the Parties' respective capacities for effectively enforcing their environmental laws and regulations. The project has two branches, corresponding to the administrative division of tasks in government: (1) wildlife enforcement (2) pollution control tracking and enforcement. Within each of these two areas, the CEC capacity building project focuses on matters identified by the Parties as priorities.

Under the leadership of NAWEG, the branch dealing with wildlife enforcement continues to focus on building regional capacity and expertise for enforcing North American laws implementing the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and fostering a regional approach to common enforcement obligations and priorities.

The second branch deals with enforcement issues associated with pollution control. In 2002 it will carry out follow-up work to its 2001 training for enforcing North American laws and regulations implementing the Montreal Protocol on Substances that Deplete the Ozone Layer.

### Goals and Objectives

The goal of this project is to build regional capacity and expertise for enforcement and compliance activities with respect to wildlife and pollution control issues.

The objectives of this project include:

- design and delivery of joint regional environmental and wildlife enforcement capacity-building initiatives;
- examination of alternative approaches to effective enforcement and enhanced compliance with environmental and wildlife laws;
- support to development of regional enforcement data bases and enhanced opportunities for intergovernmental exchange of enforcement related information; and

- support to the delivery of the Parties' NAAEC Article 6 of the North American Agreement on Environmental Cooperation (NAAEC) obligation regarding private access to remedies.

### Rationale

The project arises from the Parties' obligations under Article 5 of NAAEC to "effectively enforce their respective environmental laws" and the Council obligation under NAAEC Article 10 (4) to encourage effective enforcement and compliance and technical cooperation in that regard. In addition, NAAEC Article 6 requires the Parties to provide private right of access to remedies.

To support fulfillment of these obligations, the Council, through Resolution 96-06, established the North American Working Group on Environmental Enforcement and Compliance Cooperation (EWG), whose mandate includes supporting capacity building in effective enforcement and enhanced compliance. In addition, the mandate of the adjunct North American Wildlife Enforcement Group (NAWEG) encompasses cooperation in capacity building for enforcement of wildlife laws and regulations. The program area further reflects the direction provided by the CEC Council in *A Shared Agenda for Action* to provide compliance assistance and to enhance capacity to track and enforce CITES violations. In addition, this project supports the greater emphasis on capacity building agreed by Council at their eight regular session.

Under the leadership of NAWEG, the Parties are in the process of developing a long-term strategy and agenda for ensuring the effective enforcement of their respective laws regulating the protection of wildlife, currently targeting protection of endangered species consistent with the obligations prevailing under CITES. This project area is designed to support two objectives: building enforcement capacity; and building a regional enforcement network. The projects are designed to build on previous work and achievements and to lead into the next phases of a regional strategy for effective enforcement.

Recent capacity building for pollution control tracking and enforcement has targeted the illegal trade of ozone-depleting substances (ODSs). All three NAFTA Parties are signatories to the Montreal Protocol on Substances that Deplete the Ozone Layer. Both the United States and Canada have already imposed severe limitations on the production and importation of many types of ODSs and Mexico is seeking to impose similar restrictions on CFC-12 and other ozone-depleting substances. However, some restricted ODSs (such as CFC-12, or “Freon,” which is used as a refrigerant in automobile air conditioners) are still in high demand in North America. As a result, a thriving illegal trade in these substances has developed. Joint training not only builds enforcement capacity but serves as a foundation to build an enforcement network for continuing cooperation and opens the door to future collaboration with UNEP in a broader network involving Central and South American countries.

In 2002, the CEC will sponsor a training session on mutual legal assistance mechanisms for enforcement actions. There are bilateral agreements on extradition and mutual legal assistance between the United States and Mexico, the United States and Canada and Canada and Mexico. These agreements were entered into in order to assist law enforcement personnel, particularly criminal investigators and prosecutors, in enforcing domestic law. In some areas of law enforcement, these agreements have proven to be useful tools. Unfortunately, many involved in the enforcement of environmental and natural resources laws have, because of a lack of exposure and experience, been unable to take advantage of these laws. To address this shortcoming, the CEC will sponsor a conference of environmental enforcement officials from the three countries to discuss the use of mutual legal assistance mechanisms as tools for improving the enforcement of each Party’s domestic environmental and natural resources laws. Opportunities will be explored to work in conjunction with existing training networks for enforcement agencies in North America.

## Progress to Date

The Enforcement Cooperation program, under the guidance of the EWG and NAWEG, has to date concentrated the capacity building project in the following priority areas:

### 1. Wildlife Enforcement

#### a) CITES tracking and enforcement

- Since 1995, five regional training programs have been delivered to enforcement officials on critical areas of trade in endangered species of birds (1996), furbearing mammals (1996), reptiles (1997), coral and marine invertebrates (1998) and trophy-hunting and game-farming species (2000). These sessions allow wildlife officials from all three countries to focus on the enforcement issues for exchange of information on the regulatory regimes, the nature of legal and illegal activities, strategies to detect and deter illegal activities, and involvement of other groups in ensuring compliance.

#### b) Wildlife forensics

- In 1997, the CEC, in cooperation with NAWEG, the US National Fish and Wildlife Forensics Laboratory, and the *Universidad Nacional Autónoma de México*, sponsored a seminar for enforcement officials and forensics authorities of the three countries on forensic techniques, DNA identification techniques, crime scene investigation, necropsy issues, species identification and medicinal trade issues. In 1999, the CEC, in cooperation with NAWEG and the Northwest Association of Forensic Scientists, sponsored a series of workshops on new techniques and developments in forensics. NAWEG, with funding from the CEC, developed a directory of North American forensics experts, which will help rationalize and better share expertise in this area among all three Parties. In addition, two information brochures on forensic techniques were published and distributed to wildlife enforcement officials in the three countries.

**c) Training exchanges**

- In 1998,1999 and 2001,the CEC provided support for training exchanges. Under those joint initiatives, subsidies were provided for the participation of wildlife enforcement officials in each others' training programs to facilitate the exchange of training information and techniques among the agencies. In addition, support was given to meetings of the NAWEG Inspection Task Group towards development of a long-term joint or cost-shared inspector training.

**2. Pollution Control Tracking and Enforcement**

A second priority area identified for enforcement capacity building is the tracking and enforcement of pollution control laws.

- a) Capacity to enforce laws regulating the transboundary movement of ozone depleting substances (ODSs) in North America.

Since 1996 the EWG has identified the need for cooperation in improving the capacity to track and enforce laws regulating the transboulder movement of ODSs. In 2001, NACEC, in cooperation with the responsible agencies of the three countries, UNEP and representatives of the industry in Mexico, sponsored a two-day workshop on ODS enforcement issues related to the illegal traffic of these substances in North America.

**Public participation**

A number of specific initiatives will be incorporated in this project over the next few years, both to ensure that the views of the public and regulated industry are considered in selecting priorities for cooperative action,and for the delivery stage of specific initiatives. Although training events are directed to government officials, to the extent possible, industry and NGO representatives will be invited to give their perspective on enforcement issues in the ODS regional forums and the NAWEG seminars. Moreover, appropriate follow-up will be considered to the dialogue between the

**2002**

**Estimated Resources Required (C\$)**

<b>Action 1: Help build wildlife and CITES tracking and enforcement capacity</b>		<b>87,000</b>
Activity 1: Organize and hold a workshop on enforcement issues regarding trade and illegal harvest of protected plant species	62,000	↓
Activity 2: Offer ongoing support to wildlife enforcement training network and partnership	10,000	
Activity 3: Collaborate on CEC projects on priority ecoregions and invasive species	3,000	
Activity 4: Commence planning for 2003 training seminar on invasive species	4,000	
Activity 5: Follow up work for the 2001 seminar on public participation in wildlife enforcement activities	8,000	
<b>Action 2: Help build pollution control tracking and enforcement capacity</b>		<b>120,000</b>
Activity 1: Sponsor a meeting of ODS enforcement officials to explore potential sources of support and exchange of enforcement data and intelligence and to identify priorities for joint capacity-building initiatives	60,000	↓
Activity 2: Sponsor a seminar of environmental enforcement officials from the three countries to discuss the use of mutual legal assistance mechanisms as tools for improving the enforcement of each Party's environmental laws	60,000	
<b>Total Resources Required</b>		<b>207,000</b>



NAWEG and the public on the issue of priorities and alternative strategies for improved wildlife enforcement. Finally, the CEC will keep supporting the NAWEG web page, which provides easier public access to its activities and publications.

### **Capacity Building**

The Enforcement and Compliance Capacity Building project can be considered as the mechanism to implement the capacity building elements of project 4.2.1. The enhanced capacity of the Parties' environmental and wildlife enforcement agencies to work cooperatively in meeting the obligation of effective enforcement is the foremost result of this project.

### **Expected Results**

Support for capacity building for effective environmental enforcement and compliance reinforces ongoing efforts by each Party. Wildlife enforcement capacity-building initiatives will involve continued support to the joint efforts of NAWEG, in its pursuit of cooperative approaches to sharing information and expertise in order to enhance the capacity to track and enforce wildlife laws. In the wildlife area, particular attention will be given in the future to expanding NAWEG's activities, so far as resources permit, to include other national, state and provincial agencies and associations.

Pollution control tracking and enforcement initiatives will address two priorities: (1) follow-up to the training in Mexico on enforcement issues related to ozone-depleting substances, and (2) training on use of mutual legal assistance and extradition agreements.

### **Expected Partners and/or Participants**

Partnerships will continue between the CEC and the Parties' pollution control and wildlife enforcement agencies, Environment Canada, US EPA, US Fish & Wildlife Service, and Profepa, without whose cooperation the program would not be possible. Efforts have already been made to expand the regional enforcement network for capacity building to include the Parties, customs agencies, as well as state and provincial agencies. These efforts will be extended to also include other related agencies responsible for fisheries and parks, as well as tribal governments and First Nations. In the future, partnerships will also be sought with nongovernmental organizations regarding exercise of their rights and opportunities under NAAEC Article 6 relating to private access to remedies as a means to enhance compliance with and enforcement of environmental laws and regulations. Moreover, these partnerships will help to ensure observance of NAAEC commitments to participation and transparency.

Efforts will be intensified to forge working relationships with other institutions and agencies such as the World Bank, UNEP and OAS to explore opportunities for cost sharing in capacity building (joint seminars or workshops, support to speakers, training material, etc).

### **Linkages to other CEC Projects**

NAWEG representatives participated in the planning for the 2001 workshop on invasive species organized by the Conservation of Biodiversity program and will pursue this collaboration in their own initiative on invasive species in 2003.

## **Actions 2003–2004**

### **2003**

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#### **Action 1: Help build wildlife and CITES tracking and enforcement capacity**

Activity 1: Organize and present a training seminar on enforcement issues relating to invasive species

Activity 2: Offer ongoing support to wildlife enforcement training network and partnership

Activity 3: Collaborate on CEC project on priority ecosystem regions

Activity 4: Follow up seminar on enforcement issues for endangered plant species by publication of information bulletins

Activity 5: Support networking and outreach to other agencies to identify priorities for joint capacity-building initiatives and to explore potential sources of support

Activity 6: Plan for 2004 seminar on enforcement technology tools and for 2005 seminar intelligence data collection and analysis

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#### **Action 2: Help build pollution control tracking and enforcement capacity**

Activity 1: Follow up to seminar on mutual legal assistance

### **2004**

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The CEC anticipates continuing work in this area in 2004.

### 4.2.3 Enforcement/Compliance Reporting

#### Project Summary

The Enforcement Working Group has since 1995 prepared the enforcement section of the CEC's annual report. This reporting function was enhanced in 2000 with the preparation of a special enforcement report, which focused on three enforcement topics: inspections, compliance promotion, and results measurement. This project was undertaken in response to public demand for more in-depth information on the Parties' enforcement and compliance promotion activities. In subsequent years, the EWG will develop biannually a special report on a selected topic.

#### Goals and Objectives

The goal of this project is to provide the public on a biannual basis with information on selected areas of enforcement and compliance promotion activities in North America.

#### Rationale

This project fits into the broad objectives of NAAEC to promote transparency and public participation in the development of environmental laws, regulations and policies. Information is an essential pre-condition for meaningful public participation. It is a means of fulfilling the Parties' commitments to promote education in environmental law, in this case, its application by the Parties. It responds to the Article 5 obligation to issue bulletins or other periodic statements on enforcement procedures. It also is tied to the commitment in *A Shared Agenda for Action* to share information on environmental standards, enforcement, compliance and performance.

## 2002

### Estimated Resources Required (C\$)

Action 1: EWG will select a topic and develop a special report in an enforcement issue	60,000
Action 2: Promote public outreach through (a) consultations with JPAC, NACs and other groups; (b) contribution to the CEC electronic newsletter, Trio; (c) distribution of related reports to public	5,000
	↓
<b>Total Resources Required</b>	<b>65,000</b>

## Progress to Date

The EWG and NAWEG coordinated the preparation of the 1995, 1996, 1997, 1998 and 1999 annual reports by the Parties on their enforcement-related obligations. The 1995 report provided an overview of the policy, programs and strategies of the three countries to serve as a baseline for future reports. In 2000, in response to public demand for greater information on enforcement activities in the three countries, the EWG produced a special enforcement report dealing with three topics: inspections, compliance promotion and measurement of program results. This report was distributed to the public in 2001 through making printed copies available and by posting it on the CEC web site.

## Public Participation

Improving outreach to the public is a major challenge for all enforcement agencies. To date, the EWG and NAWEG have initiated consultations with JPAC and have sponsored, with JPAC, a seminar on public participation in enforcement activities. Brochures on NAWEG have been published and distributed, providing updates on the membership, priorities and activities of this regional enforcement network. All program reports and bulletins are available to the public on the CEC homepage and hard copies can be obtained by contacting the CEC.

## Expected Results

This project will produce an informative report on an annual basis on specific topics in the area of environmental law enforcement and compliance promotion. This responds to public demand for more transparency in this area.

## Expected Partners and/or Participants

The collaboration of the EWG and the enforcement agencies in each country is an important factor in obtaining timely and accurate information

## Linkages to other CEC Projects

There will be an attempt to link topics chosen for the enforcement reports with work in other CEC program areas.

## Actions 2003–2004

### 2003

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Action 1: The CEC will publish and make available to the public the report produced by the EWG in 2002

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Action 2: Promote public outreach through (a) consultations with JPAC, NACs and other groups; (b) contribution to the CEC newsletter, *Trio*; (c) distribution of related reports to public

### 2004

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Action 1: EWG will select a topic and develop a special report in an enforcement issue

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Action 2: Promote public outreach through (a) consultations with JPAC, NACs and other groups; (b) contribution to the CEC newsletter, *Trio*; (c) distribution of related reports to public

### 4.3.1 Sustainable Use and Conservation of Freshwater in North America

#### Project Summary

At the eighth Regular Session of Council, held in Guadalajara in June 2001, Council members agreed to initiate work in the area of sustainable watershed management in the region, including consideration of affordable water-related technologies and water pricing. To define opportunities in this area, the CEC will hold a series of small workshops with water policy experts to develop recommendations for Council on future work.

Additionally, the CEC will employ the OECD-developed key environmental indicators as part of its State of the North American Environment report to, among other things, examine freshwater resources. In 2002, the CEC will provide additional information pertaining to the indicators relevant to freshwater resources by preparing a special chapter summarizing key issues relating to the sustainable use and conservation of freshwater in North America. The content of this special chapter will be informed by one or more small experts' meetings.

#### Expected Results

The North American water policy-working group will provide recommendations for concrete action to promote the sustainable use and conservation of freshwater in the region. Future work will be based on those options that Council identifies for continuing CEC efforts in this area.

#### Expected Partners and/or Participants

The workshop(s) will include recognised experts in water policy from governments, academia, business and nongovernmental organizations. The CEC will also invite officials from relevant international organizations such as the International Joint Commission, International Boundary and Waters Commission, Border Environment Cooperation Commission and the North American Development Bank.

## 2002

### Estimated Resources Required (C\$)

Action	Description	Estimated Resources Required (C\$)
<b>Action 1:</b>	<b>Sustainable Use and Conservation of Freshwater in North America</b>	<b>85,000</b>
Activity 1:	Develop regional information derived from OECD water indicator data as part of the CEC State of the Environment report, and prepare special chapter on North America freshwater resources (funded from SOUN)	
Activity 2:	Convene a series of small workshops with leading water policy experts from government, academia, industry and nongovernmental organizations, to identify key policy options for sustainable watershed management, including consideration of affordable technologies and pricing	60,000
Activity 3:	Develop a concept paper outlining a long-term vision of the role of the CEC in this important area, including a presentation of options and recommendations for Council developed by experts in activity 2	25,000
<b>Total Resources Required</b>		<b>85,000</b>




## **OTHER INITIATIVES OF THE CEC**

This section includes information on activities of the CEC that are either mandated by NAAEC, as in the case of Specific Obligations Under the Agreement (SOUN) and the Joint Public Advisory Committee, or that stem directly from decisions taken by the Ministers, such as the creation of the North American Fund for Environmental Cooperation (NAFEC).

## Specific Obligations under the Agreement (SOUN)

In addition to the actions and initiatives described in this three-year program plan, CEC will continue to support the specific obligations under the North American Agreement for Environmental Cooperation. This includes:

<b>2002</b>	<b>Estimated Resources Required (C\$)</b>
<b>Article 10(5)(a) – CEC Resource Centre</b> Acquisition of periodicals and monographs, online services, network, web and programming support, training, web hosting, software updates	245,000
<b>Article 10(6) – Cooperation with the NAFTA FTC</b> To support the meetings, preparatory work and actions of the Article 10(6) working group	30,000
<b>Article 10(7) – TEIA</b> Assist the Parties with actions identified to advance TEIA implementation in North America	20,000
<b>Article 11(6) – 2003–2005 Program Plan and Budget</b> Prepare, translate, print and distribute the Program Plan and Budget	60,000
<b>Article 12(1) – 2000 Annual Report</b> Prepare, translate, print and distribute the 2000 Annual Report	30,000
<b>Article 12(3) – 2002 State of the Environment Report</b> Prepare the SOE report, for publication in 2003, including development of environmental indicators and preparation of a special chapter on freshwater resources	100,000
<b>Article 13 - Secretariat Reports</b> Complete, translate and publish the Electricity and Environment Initiative report including submittal of final report to Parties	80,000
<b>Article 13</b> Initiate work on one or more new initiatives	116,000
<b>Article 14-15 Submissions on Enforcement Matters</b> Analysis, processing and translations related to submissions, based on current workload and projected estimates of four to five new submissions and three to five factual records	516,000
	
	<b>Total Resources Required 1,197,000</b>



## North American Fund for Environmental Cooperation (NAFEC)

In 2002–2004, the North American Fund for Environmental Cooperation (NAFEC) will continue to:

- support community-based projects;
- emphasize aspects of capacity building and the development of partnerships across borders and sectors;
- issue a focused Call for Proposals linked to one or more CEC projects and link the results of NAFEC-supported projects to other components of the CEC's work program;
- emphasize public participation within CEC processes and others of regional relevance; and
- broadly disseminate information about NAFEC and NAFEC-supported projects and continue to strengthen the networking and information exchange function of NAFEC.

During 2002, NAFEC will again operate with a reduced budget. Approximately, US\$400,000 will be available for grants to community-based projects. The CEC will again focus the NAFEC Call for Proposals on a specific program area (renewable energy and energy conservation and efficiency in 2002). The 2002 Call for Proposals will be released in early 2002 with a deadline of 31 March. The CEC will also continue to explore alternatives for additional funding. Such efforts will include both collaboration with other funders as well as developing innovative mechanisms for financing environmental initiatives.

### **2002 Estimated Resources Required (C\$)**

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Total Resources Required 775,000

## The Joint Public Advisory Committee (JPAC)

The Joint Public Advisory Committee (JPAC) is one of the constituent bodies of the CEC, along with the Council and the Secretariat. As a group of fifteen volunteer citizens, five from each country, JPAC recognizes that in one respect it functions as a microcosm of the public: independent individuals who contribute diverse institutional experience and cultural perspectives. JPAC may provide advice to the Council on any matter within the scope of NAAEC. In another respect, as it represents the North American community-at-large (not one country in particular), one of its important obligations is to ensure that public input and concerns are taken into account when formulating its advice to Council.

JPAC's vision is to promote continental cooperation in ecosystem protection and sustainable economic development, and to ensure transparency and active public participation in the actions of the CEC. The members share a commitment to preserve and enhance the North American environment and to achieve a sustainable society.

### Articles 14 and 15 of the NAAEC

JPAC will participate in the implementation of Council Resolution 00-09 on matters related to Articles 14 and 15 of the Agreement and provide an advice to Council on this issue. It is expected that JPAC will review the progress made on the conclusions presented in its June 2001 report to Council concerning the lessons learned in the NAAEC Articles 14 and 15 submissions process and by which new issues can be re-examined.

## 2002 Estimated Resources Required (C\$)

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Total Resources Required 370,000\*

\* This budget forecast excludes the expenses that could be incurred following a future decision by Council to entrust specific additional mandates to JPAC.

### CEC Program

In addition, JPAC will participate throughout the year in CEC public meetings and be prepared to initiate new advice to Council as the need arises.

JPAC should attend the joint public meeting of the Expert Advisory Board on Children's Health and the Environment in North America; in conjunction with the 2002 Regular Session of Council in June, JPAC will organize Round Tables with the public; also JPAC will participate in the Second CEC North American Symposium on Assessing Links between Trade and Environment as well as the CEC Summit on Air Quality.

### Administrative Matters

The annual joint meeting between the Council and JPAC, in conjunction with the June Regular Session of Council, and joint meetings with the Alternate Representatives provide further opportunities to advise Council on strategic directions for the CEC and on such administrative matters as the Program Plan and budgetary allocations.

Moreover, JPAC will continue to encourage mutual exchanges with the National and Governmental Advisory Committees on issues related to CEC and, in the process, receive more direct feedback on matters of importance in each NAFTA country. This it will include, together with public input, in an advice to Council.

This direct involvement also permits JPAC to be proactive and address public concerns within the CEC, as well as receive public input on selected program and administrative topics at each of its meetings for inclusion in appropriate advice to Council.

The CEC Budget consists of the following categories:

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## Program

This item includes:

- project costs, including costs of publications;
  - salaries of staff whose activity relates directly to projects, Council, JPAC and Executive Management;
  - NAFEC—including management costs as well as funds for grants of up to \$100,000 and funds for projects not exceeding \$10,000;
  - specific obligations under NAAEC;
  - a portion of rent (85 percent);
  - costs of Council Sessions, JPAC meetings and public meetings;
  - telecommunication costs;
  - executive management, including costs for the Mexico liaison office; and
  - planning and evaluation costs.
- 

## Administration and support

These items support the Commission as a whole and include Administration and Accounting, Public Outreach, the remaining part of rent (15 percent), external administrative support, relocation expenses for staff, office equipment and supplies, and operating equipment that include the payments for ongoing equipment leases.

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## Contingency Fund

Set aside for unforeseen costs.

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# 2002 Project Budget Summary

## I – ENVIRONMENT, ECONOMY AND TRADE

### Understanding Linkages between Environment, Economy and Trade

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1.1.1	<i>Assessing the Environment in the Context of North American Market Integration</i>	<b>365,000</b>
	Cooperative and partnership agreements, professional fees	145,000
	Travel, accommodation, interpretation and meetings expenses	190,000
	Translation, publication and distribution costs	30,000
	Other expenses	-

### Market-based Mechanisms

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1.2.1	<i>Supporting Environmental Protection and Conservation through Green Goods and Services</i>	<b>195,000</b>
	Cooperative and partnership agreements, professional fees	50,000
	Travel, accommodation, interpretation and meetings expenses	110,000
	Translation, publication and distribution costs	35,000
	Other expenses	-

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1.2.2	<i>Financing in Support of Environmental Protection and Conservation</i>	<b>140,000</b>
	Cooperative and partnership agreements, professional fees	95,000
	Travel, accommodation, interpretation and meetings expenses	25,000
	Translation, publication and distribution costs	20,000
	Other expenses	-

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1.2.3	<i>Exploring Market-based Mechanism for Carbon Sequestration, Energy Efficiency, and Renewable Energy in North America</i>	<b>190,000</b>
	Cooperative and partnership agreements, professional fees	120,000
	Travel, accommodation, interpretation and meetings expenses	50,000
	Translation, publication and distribution costs	20,000
	Other expenses	-

## II – CONSERVATION OF BIODIVERSITY

### North American Biodiversity Conservation Strategies

2.1.1	<i>Strategic and Cooperative Action for the Conservation of Biodiversity in North America</i>		<b>25,000</b>
	Cooperative and partnership agreements, professional fees	3,000	
	Travel, accommodation, interpretation and meetings expenses	20,000	
	Translation, publication and distribution costs	-	
	Other expenses	2,000	

### Stewardship for Shared Terrestrial and Marine Ecosystems and Transboundary Species

2.1.2	<i>North American Bird Conservation Initiative</i>		<b>250,000</b>
	Cooperative and partnership agreements, professional fees	195,000	
	Travel, accommodation, interpretation and meetings expenses	45,000	
	Translation, publication and distribution costs	10,000	
	Other expenses -	-	
2.1.3	<i>Species of Common Conservation Concern</i>		<b>110,000</b>
	Cooperative and partnership agreements, professional fees	60,000	
	Travel, accommodation, interpretation and meetings expenses	40,000	
	Translation, publication and distribution costs	10,000	
	Other expenses	-	
2.1.4	<i>Mapping Marine and Estuarine Ecosystems of North America</i>		<b>140,000</b>
	Cooperative and partnership agreements, professional fees	60,000	
	Travel, accommodation, interpretation and meetings expenses	5,000	
	Translation, publication and distribution costs	70,000	
	Other expenses	5,000	
2.1.5	<i>North American Marine Protected Areas Network</i>		<b>240,000</b>
	Cooperative and partnership agreements, professional fees	110,000	
	Travel, accommodation, interpretation and meetings expenses	95,000	
	Translation, publication and distribution costs	30,000	
	Other expenses	5,000	

## II – CONSERVATION OF BIODIVERSITY Cont.

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2.1.6	<i>Closing the Pathways of Aquatic Invasive Species across North America</i>	<b>60,000</b>
	Cooperative and partnership agreements, professional fees	30,000
	Travel, accommodation, interpretation and meetings expenses	15,000
	Translation, publication and distribution costs	15,000
	Other expenses	-

### Improving Information on North American Biodiversity

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2.1.7	<i>North American Biodiversity Information Network</i>	<b>130,000</b>
	Cooperative and partnership agreements, professional fees	80,000
	Travel, accommodation, interpretation and meetings expenses	40,000
	Translation, publication and distribution costs	10,000
	Other expenses	-

## III – POLLUTANTS AND HEALTH

### Cooperation on North American Air Quality Issues

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3.1.1	<i>Facilitating Trilateral Coordination in Air Quality Management</i>	<b>180,000</b>
	Cooperative and partnership agreements, professional fees	55,000
	Travel, accommodation, interpretation and meetings expenses	80,000
	Translation, publication and distribution costs	45,000
	Other expenses	-

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3.1.2	<i>Developing Technical and Strategic Tools for Improved Air Quality in North America</i>	<b>280,000</b>
	Cooperative and partnership agreements, professional fees	135,000
	Travel, accommodation, interpretation and meetings expenses	100,000
	Translation, publication and distribution costs	45,000
	Other expenses	-

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3.1.3	<i>Trinational Air Quality Improvement Initiative: North American Trade and Transportation Corridors</i>	<b>195,000</b>
	Cooperative and partnership agreements, professional fees	115,000
	Travel, accommodation, interpretation and meetings expenses	65,000
	Translation, publication and distribution costs	15,000
	Other expenses	-

### Sound Management of Chemicals

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3.2.1	<i>Sound Management of Chemicals</i>	<b>919,000</b>
	Cooperative and partnership agreements, professional fees	500,000
	Travel, accommodation, interpretation and meetings expenses	319,000
	Translation, publication and distribution costs	100,000
	Other expenses	-

### North American Pollutant Release and Transfer Register

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3.3.1	<i>North American Pollutant Release and Transfer Register</i>	<b>479,000</b>
	Cooperative and partnership agreements, professional fees	273,000
	Travel, accommodation, interpretation and meetings expenses	67,000
	Translation, publication and distribution costs	131,000
	Other expenses	8,000

### Pollution Prevention

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3.4.1	<i>Capacity Building for Pollution Prevention</i>	<b>130,000</b>
	Cooperative and partnership agreements, professional fees	65,000
	Travel, accommodation, interpretation and meetings expenses	50,000
	Translation, publication and distribution costs	10,000
	Other expenses	5,000

### Children's Health and the Environment in North America

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3.5.1	<i>Children's Health and the Environment in North America</i>	<b>163,000</b>
	Cooperative and partnership agreements, professional fees	88,000
	Travel, accommodation, interpretation and meetings expenses	50,000
	Translation, publication and distribution costs	23,000
	Other expenses	2,000

## IV – LAW AND POLICY

### Environmental Standards and Performance

4.1.1	<i>Comparative Report on Environmental Standards</i>	90,000
	Cooperative and partnership agreements, professional fees	-
	Travel, accommodation, interpretation and meetings expenses	40,000
	Translation, publication and distribution costs	50,000
	Other expenses	-
4.1.2	<i>Environmentally Sound Management of Hazardous Waste</i>	207,000
	<b>Environmentally Sound Management (ESM) of Hazardous Waste</b>	<b>137,000</b>
	Cooperative and partnership agreements, professional fees	60,000
	Travel, accommodation, interpretation and meetings expenses	77,000
	Translation, publication and distribution costs -	-
	Other expenses	-
	<b>Transborder Movement of Hazardous Waste</b>	<b>70,000</b>
	Cooperative and partnership agreements, professional fees	45,000
	Travel, accommodation, interpretation and meetings expenses	25,000
	Translation, publication and distribution costs	-

### Enforcement Cooperation

4.2.1	<i>North American Regional Enforcement</i>	63,000
	<b>Forum Regional Enforcement Network</b>	<b>45,000</b>
	Cooperative and partnership agreements, professional fees	15,000
	Travel, accommodation, interpretation and meetings expenses	30,000
	Translation, publication and distribution costs	-
	Other expenses	-
	<b>North American Regional Action Plan on Mercury</b>	<b>18,000</b>
	Cooperative and partnership agreements, professional fees	15,000
	Travel, accommodation, interpretation and meetings expenses	3,000
	Translation, publication and distribution costs -	-
	Other expenses	-



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4.2.2	<i>Enforcement and Compliance Capacity Building</i>	<b>207,000</b>
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	<b>Wildlife and CITES tracking and enforcement capacity</b>	<b>87,000</b>
	Cooperative and partnership agreements, professional fees	20,000
	Travel, accommodation, interpretation and meetings expenses	67,000
	Translation, publication and distribution costs	-
	Other expenses	-
<hr/>		
	<b>Pollution Control Tracking and Enforcement Capacity</b>	<b>120,000</b>
	Cooperative and partnership agreements, professional fees	40,000
	Travel, accommodation, interpretation and meetings expenses	80,000
	Translation, publication and distribution costs	-
	Other expenses -	-

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4.2.3	<i>Enforcement/Compliance Reporting</i>	<b>65,000</b>
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	Cooperative and partnership agreements, professional fees	60,000
	Travel, accommodation, interpretation and meetings expenses	5,000
	Translation, publication and distribution costs -	-
	Other expenses	-

## Environmental Policy

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4.3.1	<i>Sustainable Use and Conservation of Freshwater in North America</i>	<b>85,000</b>
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	Cooperative and partnership agreements, professional fees	30,000
	Travel, accommodation, interpretation and meetings expenses	40,000
	Translation, publication and distribution costs	15,000
	Other expenses	-

## General 2002

<b>1 - 4. Program</b>			<b>4,908,000</b>	
1.	Environment, Economy and Trade	890,000	↓	
2.	Conservation of Biodiversity	955,000		
3.	Pollutants and Health	2,346,000		
4.	Law and Policy	717,000		
<b>7. Program support</b>			<b>6,205,000</b>	
7.1	Salaries	3,826,000	↓	
7.2	Telecommunications	89,000		
7.3	Rent	660,000		
7.4	Operating equipment	170,000		
7.5	Office supplies	140,000		
7.6	Relocation and orientation	115,000		
7.7	Executive Management	424,000		
7.7.1	Office of the Executive Director	190,000		
7.7.2	Program Directorate	30,000		
7.7.3	Communications Directorate	30,000		
7.7.4	Mexico Liaison Office	174,000		
7.8	Public outreach	435,000		
7.9	Planning and Evaluation	156,000		
7.10	Contingency fund	190,000		
7.10.1	Unforeseen needs	152,000		
7.10.2	Reserve for reimbursement of Quebec taxes	38,000		
7.10.3	Reserve for currency fluctuations	-		
<b>8. Other initiatives</b>				<b>2,645,000</b>
8.1	SOUN	1,197,000		↓
8.2	NAFEC	755,000		
8.3	Council	293,000		
8.4	JPAC	400,000		
<b>Grand Total for Program-related Costs</b>			<b>13,758,000</b>	
<b>9. Administration and finance</b>			<b>1,108,000</b>	
9.1	Salaries	666,000	↓	
9.2	Telecommunications	12,000		
9.3	Rent	90,000		
9.4	Operating equipment	15,000		
9.5	Office supplies	16,000		
9.6	Relocation and orientation	22,000		
9.7	External administrative support	287,000		
<b>Total Expenses</b>			<b>14,866,000</b>	

## SUMMARY

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### Description 2002

1. Program	13,758,000
2. Administration and finance	1,108,000
<b>Total Expenses</b>	<b>14,866,000</b>

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## REVENUES

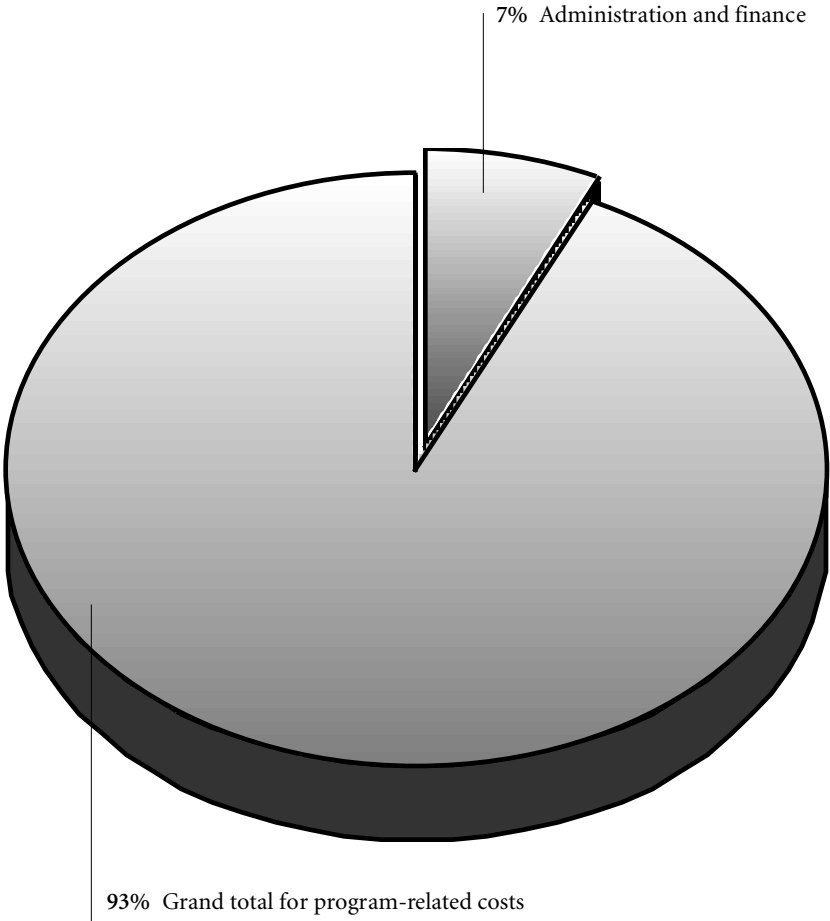
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### Income 2002

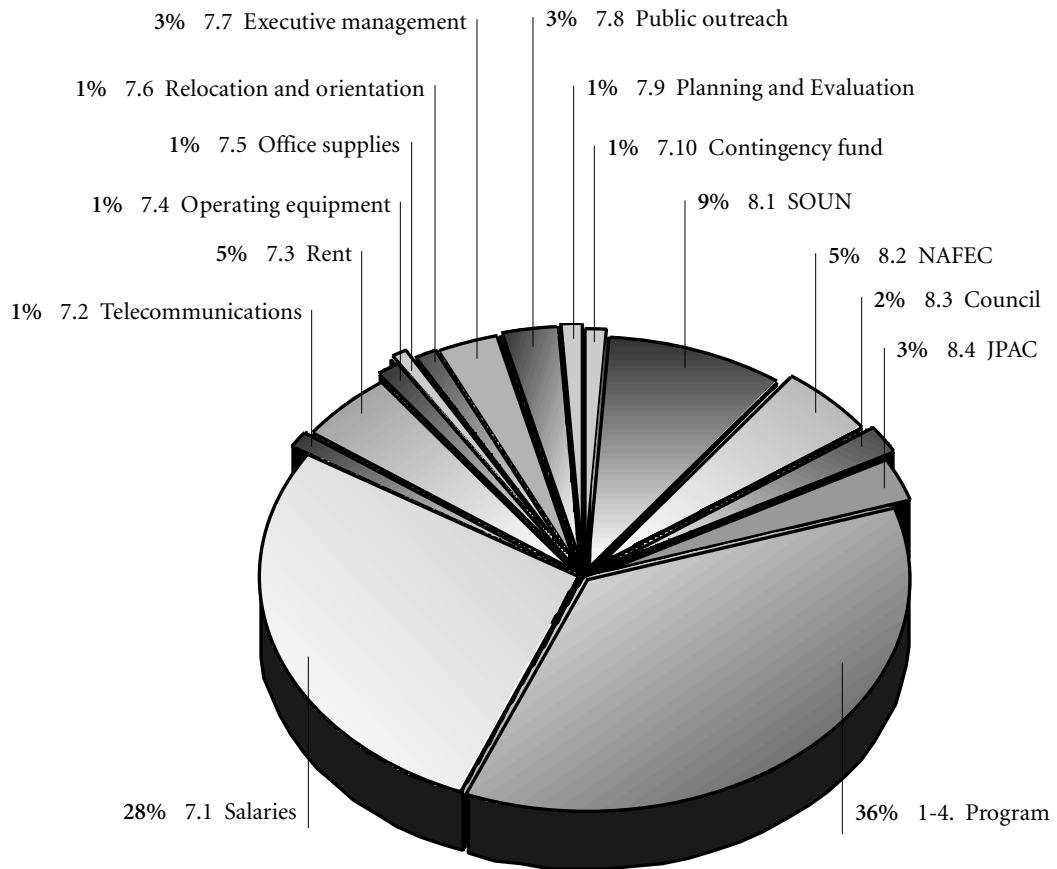
Parties' contributions	14,070,000
Carry over	663,000
Interest	133,000
<b>Total Income</b>	<b>14,866,000</b>

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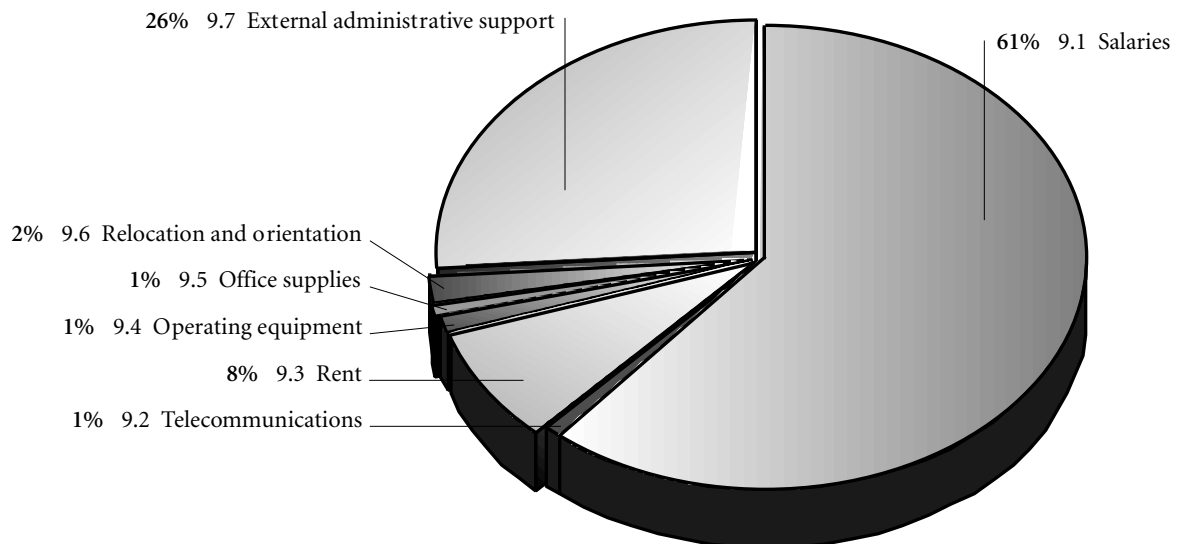
**GRAPHIC OVERVIEW - 2002**



## PROGRAM RELATED COSTS - 2002



## ADMINISTRATION AND FINANCE - 2002



## ANNEX A: A SHARED AGENDA FOR ACTION

### A statement on the future work of the Commission for Environmental Cooperation

Mérida, Mexico, 26 June 1998

The three North American environment ministers have reviewed the implementation of the North American Agreement on Environmental Cooperation during its first four years, as well as the operations and effectiveness of the Commission for Environmental Cooperation (CEC).

We have listened to comments and advice from a wide range of people, and particularly want to thank the Independent Review Committee and the Joint Public Advisory Committee.

The CEC is a unique and valuable institution. It represents the state of the art in considering environmental issues in trade agreements, and it has a mandate to promote sustainable development. The CEC brings together two members of the G-7 group of industrialized nations and Mexico, still in many ways a developing country. This grouping of nations provides a microcosm of many of the problems of sustainable development facing the world today. The discussion of sustainability through the CEC provides for direct public input from the citizens of all three countries.

The Commission launched a wide range of projects in its first four years, and has many successes to its credit. It is now time for the CEC to further sharpen its focus. This document begins the process of developing a longer term and more strategic approach to the work of the CEC.

This framework builds on the CEC's strengths. It is trilateral, and should continue to focus its work on issues of common importance to the three countries. It has the concept of sustainable development at its core, and is therefore in an ideal position to identify policies that can promote environmental sustainability.

The CEC is a new institution within a forest of international organizations, and so must continue to select its niche with care, avoiding duplication with other institutions supported by the three countries, and building upon their work where appropriate. It has shown an ability to leverage its limited financial resources and use them to stimulate financial commitments from larger organizations. It can deliver projects "on the ground," and build capacity for environmental management. Because of its emphasis on public participation, the CEC can develop partnerships with the private sector and other actors in civil society.

Given the CEC's resources, it needs to focus on a limited number of projects. The Commission should aim to produce tangible results from some of its projects each year. It will also make capacity building an important part of the work program.

The following two priority areas will be the focus of the CEC's workplans over the next several years: Pursuing Environmental Sustainability in Open Markets, and Stewardship of the North American Environment.

## I. Pursuing Environmental Sustainability in Open Markets

Trade liberalization that is supportive of environmental priorities can be helpful in achieving sustainable development. It can provide additional financial resources for environmental protection, and it can provide meaningful employment opportunities for the disadvantaged. It can facilitate the importation and use of the cleaner and more efficient technologies necessary for the transition to sustainable development. It can open new market niches for environmentally friendly products.

But freer trade without robust national environmental policies can also accelerate environmental degradation. There have been fears that it could lead to a “race to the bottom” if countries lower their standards in order to remain competitive and attract foreign investment, and it could lead to unsustainable consumption of natural resources.

However, enlightened management of the trade and environment relationship can result in improved conditions in both sectors. The CEC can help governments to formulate actions and policies that promote the kind of trade that supports sustainable development. It can help governments to monitor trends in domestic legislation and compliance to ensure that domestic laws are being effectively enforced. The Commission can assist the three countries by facilitating cooperative efforts in ensuring compliance.

Pursuing environmental sustainability in open markets includes the following areas of concentration: promoting trade in environmentally friendly goods and services; exploring the linkages between environment, economy and trade; environmental standards, enforcement, compliance and performance; and regional action on global issues.

### Promoting Trade in Environmentally Friendly Goods and Services.

The market for cleaner, environmentally sound technologies is estimated at over \$250 billion annually in the OECD countries alone. North America has only scratched the surface of the potential for “greener trade.”

It is important to find ways to make biodiversity conservation more economically viable. Increased legal trade in wildlife, if managed sustainably, can provide resources to preserve and enhance biodiversity in the three countries. As part of seeing that such trade does not harm biodiversity, the CEC should facilitate cooperative efforts by the countries to meet their obligations under Convention on International Trade in Endangered Species of Wild Flora and Fauna, to prevent illegal trade in endangered species.

Properly managed, ecotourism can also bring badly needed financial resources to North America’s poorest regions. It can provide employment, and preserve biodiversity and natural beauty.

More sustainable forms of agriculture provide products for emerging markets. For example, coffee that is planted together with trees, rather than in open fields, can help preserve biodiversity, particularly bird life.

The new project on by-product synergy promises a pioneering experiment among private entrepreneurs, by encouraging industries to exchange, recycle or minimize the creation of materials that are now discharged as wastes. A material that is a waste to one company may be used as a product by another company.

### **Exploring the Linkages between Environment, Economy and Trade**

The CEC will study the positive and negative outcomes for the environment of NAFTA on an ongoing basis. In addition, the CEC will work towards identifying emerging trends related to the environment resulting from expanding economic activity. Identification of these trends will enable the CEC to examine ways in which the parties can foster policies that benefit the environment, and support the development of regional and domestic responses to adverse trends.

The CEC will work with other NAFTA bodies and appropriate international institutions to ensure that trade and environment policies are mutually reinforcing.

### **Environmental Standards, Enforcement, Compliance and Performance**

Experience has shown that it is extremely difficult to compare environmental performance among countries, or even among regions of the same country. Standards are different, pollutants are monitored differently, and legal systems differ. The CEC should therefore build on its existing work on enforcement cooperation. The CEC should concentrate on:

- the analysis of trends in each country's performance to establish a baseline,
- compliance assistance and information sharing,
- development of compliance indicators that show real changes in environmental performance, and
- the promotion of improved performance through helping to develop expertise in government environmental management systems, voluntary agreements and ways to improve environmental standards.

### **Regional Action on Global Issues**

There is a realization that the traditional "command and control" approach to environmental protection needs to be supplemented by the use of economic instruments and other market-based approaches. North America has a wealth of experience in this area.

The solutions to global environmental problems will require new partnerships between North and South. Because of its unique structure, the CEC can provide leadership in the development of some of these partnerships. For example, the Kyoto Protocol on climate change calls for the creation of a Clean Development Mechanism. Within the framework of the protocol, the CEC will work with the three nations and the private sector to develop North American opportunities for the Clean Development Mechanism. The three countries would involve the private sector in efforts to disseminate more environmentally friendly energy technologies. The CEC will also look at how to maximize the potential for carbon "sinks," such as forests.



## II. Stewardship of the North American Environment

North Americans are trustees of an amazing range of terrain, climate and marine, and terrestrial ecosystems. For example, Mexico's biodiversity places it among the 10 "megadiversity" countries in the world. Many of the problems that affect the continental environment are national, and many are shared by two of the three countries. However, there are a number that are spread across the continent as a whole. It is these problems that should concern the CEC.

Stewardship of the North American environment includes: identifying trends in the North American environment; protecting human and ecosystem health; and sustaining North American biodiversity.

### The North American Environment—Identifying Emerging Trends

The CEC will continue to provide an important service by identifying emerging threats to the shared environment, thus allowing governments to anticipate these problems and prevent them before they happen. This effort will help governments to move away from the traditional, and more expensive, "react and cure" approach. Identifying emerging threats could be done initially through a regular "issue scan," prepared by leading authorities from the three countries. Because of the interdependence of the region's environment and its economy, such a scan would need to take account of economic, as well as environmental, trends. The environmental effects of deregulation of the electricity sector could be a case in point. The CEC's State of the Environment report could provide one of the bases for the scan.

### Protecting Human and Ecosystem Health

Here, the CEC has an excellent record of achievement, and has a number of continuing projects such as:

- Cooperation on North American air quality issues
- The Sound Management of Chemicals
- North American Pollutant Releases and Transfers, which produces the *Taking Stock* reports

This work will continue to provide a critical part of the continuing program of the CEC.

### Sustaining North American Biodiversity

The CEC has also made a promising start in this area through its work with the North American Biodiversity Information Network, the mapping of ecologically significant areas, and the drafting of a North American cooperative strategy for birds. This could be used as a platform to move toward:

- developing and applying a set of basic "conservation status" indicators, and
- capacity building to help the countries meet their biodiversity objectives.

Bearing in mind the complexity of the issue and the number of activities in this area already underway in North America, a scoping study is required to derive other future program options.

### III. Implementing the Agenda for Action

#### Developing a Strategic Plan and Three-Year Project Cycle for the CEC

To implement a longer-term strategic approach, the CEC will move to a “rolling” three-year plan. The organization will always be planning ahead, and will review and renew its long-term plan every year. This provides an appropriate balance between timeliness of results and the security needed for multi-year projects.

At the organizational level, this approach will be based on close cooperation among the partners which comprise the CEC: Council, the Joint Public Advisory Committee (JPAC) and the Secretariat. The public will be engaged openly and effectively. The Secretariat and JPAC will be working from the start with representatives of the countries to develop the first rolling plan this year and the work program for 1999. In the first year, the influence of the Strategic Plan on the workplan will be limited, as many projects are already in the pipeline. But, by the end of second year, most of the CEC's projects should be developed in accord with the strategic plan.

This will require detailed planning for projects. The Secretariat will need to survey available information resources and, when appropriate, the science base for the issue. In light of the CEC's limited resources, and its function as a catalyst for most of the issues it tackles, projects will need to be able to produce concrete results, and usually be of limited duration. When possible, projects should reflect national priorities to which the governments are willing to commit their own resources for implementation of project results. Most projects will require “exit strategies” detailing how they will be carried on after CEC support has come to an end.

Projects will be designed to include milestones, and an internal mechanism to ensure their achievement. This will also entail regular project evaluation.

#### The North American Fund for Environmental Cooperation

The North American Fund for Environmental Cooperation (NAFEC) will continue to be a source for community funding, and its effectiveness will be enhanced by focusing grants awards on projects that support CEC's new three-year plan; and NAFEC will also focus on developing the capacity in public participation. This new focus for NAFEC will result in an enhanced capacity of citizens to become active partners in improving the North American environment.

# ANNEX B: REPORT OF THE MEETING OF THE COUNCIL OF THE COMMISSION FOR ENVIRONMENTAL COOPERATION

Guadalajara, Mexico, 28 June 2001

## New Vision

The Council members of the Commission for Environmental Cooperation (CEC) held a meeting where they set out a new long-term vision for the activities to be carried out by the Commission.

Based on the wealth of experience acquired to the present, they indicated the policy guidelines to be followed, the priority areas to be pursued and expanded, and certain emerging matters which, in preparation for the future, should be addressed by the Commission.

Bearing in mind the statements of the heads of state and government of the member countries, the well-being of the people of North America and the existence of shared environmental goals and objectives, they stressed the importance of following the path of integration, along which NAFTA and the CEC itself are among the first steps.

As an introduction to the discussions between the Council members, the Secretariat presented a summary of the work carried out so far and the progress achieved on implementation of the strategy laid down in 1998 by the Council. This strategy was fundamentally based on an analysis of the relationships between the economy, trade and the environment; public participation and transparency in environmental stewardship, and regional capacity building.

## Policy Guidelines for Collaborative Work

The leaders of environmental action by governments in the region collectively confirmed their will for the CEC to focus on:

- strengthening regional integration;
- promoting a sense of partnership between the members in order to achieve the shared goals and objectives;
- advocating for the development of market-based schemes;
- strengthening cooperation with the private sector;
- expanding public participation;
- increasing the exchange of and access to environmental information in the region, and
- working together on emerging environmental issues and on preventive action for future problems.

The Council members reiterated the importance of incorporating a technological dimension into the work of the Commission. In terms of the implementation of environmental policies in the region, statements were made in favor of analyzing the efficacy and mutual acknowledgement of standards, processes, management systems and mutual recognition of professionals specializing in environment, in order to create closer ties and afford greater certainty to the integration process.

Further recognized was the importance of prioritizing the theme of water in the work of the Commission with a long-term vision including a strategic framework for its conservation and sustainable use, as well as technological and price-related aspects, by means of actions based on information about its availability and quality.

In order to improve the work of the Commission, the desirability of closer ties with other sectors, especially water, agriculture, health care, energy and international trade, was expressed. For the last of these, there was agreement on the desirability of holding a joint meeting with trade officials in 2003.

Gaps in information must be filled for specific subjects such as water, climate change and natural disasters. Programs relating to the pollutant release and transfer registers (PRTR) will be strengthened so as to enhance public awareness and transparency. The Mexican representative announced the transformation of the Mexican voluntary systems into legally prescribed schemes. He was congratulated on this matter by the other members. Progress achieved on this issue will be presented at the ninth regular session of Council.

In regard to the funding of programs, it was noted that the Secretariat, in its work program, will propose the timelines and mechanisms whereby it will address the priorities laid down by Council. In addition, mention was made of the importance of flexible funding mechanisms for the work of the Commission, without altering the essentials of the Agreement (NAAEC) that created it. In this regard, it was recommended that commonalities and synergies be sought between the themes and objectives addressed by the Commission and those addressed by other international public and private entities, as well as the member countries. Such commonalities may serve as the basis for procuring additional external resources.

#### **Areas to be Pursued and Expanded :**

The Council members decided to strengthen several existing initiatives and pursue new ones. Specifically they decided to:

- Continue with those programs that have begun to develop a record of success, including, for example, the Sound Management of Chemicals (SMOC) program, the North American Biodiversity Information Network (NABIN), and the North American Bird Conservation Initiative (NABCI);
- Also mentioned was the advisability of focusing activities for the sound management of chemicals on groups of substances, like pesticides;
- Continue examining the environmental dimensions of regional integration of energy markets, with special emphasis on technology and economic instruments, and renewable sources of energy and energy efficiency;
- Follow up on earlier CEC initiatives related to regional cooperation on carbon emission mitigation and sequestration, by exploring regional market-based approaches with private sector participation for carbon sequestration, energy efficiency and renewable sources, and examine potential partnerships with international organizations such as the Inter-American Development Bank, as well explore the expansion of existing schemes to Central America;
- Increase collaboration with the private sector in areas related to clean production and capacity building, including promotion of environmental management systems, technology transfer, professional development and exploration of mutual recognition;
- Continue work on trade transportation in North America by identifying priority corridors and examining cooperation opportunities for compatible standards related to fuel and vehicle emissions;
- Expand efforts to develop a common environmental agenda aimed at protecting children's health to include other vulnerable populations such as migratory workers, and explore ways to prepare for the hemispheric ministerial meeting on health and the environment;
- Incorporate water issues into the CEC program, with a goal towards developing a North American strategic framework for the sustainable use and conservation of water that includes technology and water pricing that can enhance water availability and quality;
- Develop regionally compatible approaches to hazardous waste, transport, disposal and tracking; and
- Enhance environmental information so that North American decision makers, members of the public and institutions can have access to comprehensive, timely, and useful information. The Commission will work with the Organisation for Economic Co-operation and Development (OECD) to include the core set of OECD indicators in its future state of the environment reports.

# ANNEX C: CEC COUNCIL COMMUNIQUÉ

Guadalajara, Mexico, 29 June 2001

We, the environment ministers of Canada, Mexico and the United States, members of the Council of the Commission for Environmental Cooperation (CEC or “the Commission”), have met for our annual regular session on 28 and 29 June 2001 in Guadalajara, Mexico. We have reviewed the program activities of the Commission and received input and advice from the Joint Public Advisory Committee (JPAC), members of our national advisory bodies and the public.

This is the first session of the Council since our heads of government met in Quebec City in April for the Summit of the Americas and issued the North American Leaders’ Statement (22 April 2001). Our discussions in Guadalajara have taken into consideration their vision of working to deepen a sense of community, promote our mutual economic interest, ensure that the North American Free Trade Agreement’s (NAFTA) benefits extend to all regions and social sectors, develop and expand hemispheric and global trade, and promote broader trilateral and international cooperation.

Through our discussion, new directions for the work of the CEC over the coming years have emerged that build on the strengths of the existing work program and incorporate additional initiatives in areas such as water and hazardous wastes. To optimize the Commission’s effectiveness in promoting protection, conservation and sustainable use of the environment, we have established a framework that will emphasize:

- gathering, compiling, and sharing **high-quality environmental information**,
- promoting the use of **market-based approaches**,
- **cooperating regionally** in the implementation of **global commitments**,
- **building capacity** for stronger environmental partnerships,
- **strengthening strategic linkages to improve sustainability**, and
- promoting **public participation** in the CEC’s work.

## Environmental Information

Timely and accurate environmental information is essential for rational decision making and the development of sound environmental policies. Strengthening our capacity to acquire and share knowledge among all sectors of society is fundamental to the ability of citizens to take informed action.

In this context, we will undertake the following new initiatives:

- incorporate the core set of environmental indicators of the Organization for Economic Cooperation and Development in the CEC’s periodic reports on the state of the North American environment, to assess environmental outcomes and track progress in relation to environmental goals,
- address the information gaps existing in the region and the effective use of information technologies, especially in the priority areas established by the Council,
- regarding Mexico’s decision to seek legislation to establish a mandatory reporting system for pollutant releases and transfers, support Mexico through capacity building,
- develop a North American inventory of air emissions, as elaborated in Council Resolution 01-05, and
- continuously improve the quality, usefulness and accessibility of environmental information made available to the public, and recommend that JPAC participate in this effort.

## Market-based Approaches

The Commission recognizes that long-term success in protecting and conserving the environment will depend on our ability to foster innovation and develop creative solutions that address our shared environmental objectives in parallel with our economic and social objectives.

In this light, we will undertake the following initiatives:

- analyze issues relating to local water pricing and watershed management, and promote accessible, affordable technologies for improving water management,

- assess how the market-based approaches identified in the OECD Sustainable Development report are currently used in the North American context and could be further developed;
- building on the experience with shade-grown coffee, develop options for certification and labeling regimes,
- while the CEC is not the forum for negotiating climate change, the Council asks the Secretariat to explore further opportunities for market-based approaches for carbon sequestration, energy efficiency and renewable energy in North America.

### **Regional Cooperation for the Implementation of Global Agreements**

Building on the Commission's progress in addressing issues of global concern, we agree to:

- continue work through the Sound Management of Chemicals (SMOC) program in support of our implementation of the recently signed Convention on Persistent Organic Pollutants, which we wish to bring into force rapidly, and
- initiate the development of a North American approach to the environmentally sound management of hazardous wastes, recognizing the serious environmental and human health consequences of improper tracking and disposal.

### **Capacity Building**

A crucial component of our ability to make progress together on a variety of environmental issues is the presence of relevant capacity in each of the three countries. We:

- agree to place greater emphasis on capacity building in all aspects of the CEC's work, and have asked the Secretariat to explore opportunities for leveraging funds from multilateral agencies and other sources, and
- requested more information on the Plan Puebla-Panama, and direct the Secretariat to assess the role the CEC might play in this program, including possible collaboration with the IDB and other institutions.

### **Building Partnerships and Strategic Linkages**

Advancing environmental goals demands collaboration across sectors and building relationships with key partners. In this regard, we have identified the following initiatives:

Consistent with NAAEC Article 10(6), we will explore with our trade counterparts the possibility of convening a joint meeting between the CEC and the North American Free Trade Commission, aiming for 2003. As a first step, we instruct our senior officials to work with their counterparts on an agenda and outcomes for our consideration.

With regard to our continuing work on Children's Health and the Environment, we have established terms of reference for the expert advisory group, as described in Council Resolution 01-04. We welcome Mexico's initiative to adopt a national policy on health and environment. In addition, we have agreed to ask the Secretariat to explore expansion of this work to include other vulnerable segments of the population and to explore how it can assist the Pan-American Health Organization (PAHO)/United Nations Environment Programme (UNEP) hemispheric initiative on this issue.

Our continuing studies of the environmental dimensions of freight traffic in North America will focus on the reduction of vehicle emissions through improved management practices, technologies and infrastructure.

We acknowledge the Secretariat's continuing effort to examine the opportunities and challenges of the evolving North American electricity market, and look forward to the upcoming symposium and final report.

We have created the Biodiversity Conservation Working Group as described in Council Resolution 01-03, and look forward to the completion and implementation of the CEC Conservation of Biodiversity program's Strategic Plan for North America.

We support the work that is being done within the North American Bird Conservation Initiative (NABCI) and are looking forward to a progress report next year.

We will promote the use of the CEC guidance document on environmental management systems by small and medium-size enterprises and explore mutual recognition of programs to improve industry performance. In addition, we will promote closer collaboration with the private sector to facilitate the development and diffusion of environmental management principles and best practices among industry in North America. We also encourage industry to promote capacity building regarding pollutant release and transfer registers (PRTs) through joint training among reporting companies.

With respect to transboundary environmental impact assessment, an informal, productive process is continuing.

We encourage the CEC to strengthen its relationship with the private sector.

We encourage the Secretariat to explore mechanisms, within the NAAEC framework, for long-term financing in order to undertake projects approved by Council.

### **Public Participation**

We recognize the valuable contribution the public makes to the CEC's activities and are committed to strengthening public participation in all aspects of the CEC's work.

We appreciate the valuable role that the JPAC has played since the last Council Session in reviewing the Articles 14 and 15 submission process and engaging the public with respect to the development of its recommendations on the submission process. We are pleased with JPAC's 'lessons learned' report. As outlined in Council Resolution 01-06 on this report, we have agreed to take action on many of JPAC's recommendations. Other recommendations will require further consideration.

Mexico announced its decision to withdraw its confidentiality claim with respect to its reply to the citizen submission regarding *Metales y Derivados*. The Council agreed to request the Secretariat to provide a summary of confidentiality regulations in Canada, the United States and other countries, with a view to providing Mexico with examples in this area.

### **CEC Budget and Next Meeting of Council**

The Parties will continue to support the CEC at the level of US\$9 million for the year 2002. We will meet in Mont Tremblant, Canada, for the next Regular Session of Council in June 2002.

*The CEC was established by Canada, Mexico and the United States to build cooperation among the NAFTA partners in implementing the North American Agreement on Environmental Cooperation (NAAEC), the environmental side accord to NAFTA. The CEC addresses environmental issues of continental concern, with particular attention to the environmental challenges and opportunities presented by continent-wide free trade. The Council, the CEC's governing body, is composed of the federal environment ministers (or equivalent) of the three countries, and meets at least once a year. Attending this eighth session of Council were Karen Redman, Parliamentary Secretary to, and on behalf of, Canadian Environment Minister David Anderson, Mexican Secretary for the Environment and Natural Resources Victor Lichtinger, and US Environmental Protection Agency Administrator Governor Christine Todd Whitman. The Joint Public Advisory Committee (JPAC) is a 15-member, independent, volunteer body that provides advice and public input to Council on any matter within the scope of NAAEC.*





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