Distribution: General
C/OP09/Draft3/PROJ1
ORIGINAL: ENGLISH

Project 1	**Mapping North American Environmental Issues**	**Responsible Project Manager at the CEC Secretariat**	Evan Lloyd
Planned Allocation	C$180,000	**Working Group(s) associated with this work**	North American Atlas Consultative Group (NAACG)

Objective of Project

The objective of this project is to enable the visualization of North American environmental information through maps. This will be accomplished through the continuing development of a digital North American Environmental Atlas. This project will enhance awareness of environmental topics of continental scale, add value to other CEC projects, provide a framework for geo-referenced environmental data, and build networks among partner mapping organizations through collaboration on harmonized map layers of mutual interest.

Background

Project History and Foundation

As an initial activity, the CEC and representatives of the National Atlas agencies of Canada, Mexico and the United States—Natural Resources Canada, the *Instituto Nacional de Estadística y Geografía* (INEGI—National Institute of Statistics and Geography), and the United States Geological Survey (USGS)—collaborated to compile a number of base map layers, both in hard copy and as a digital platform. These base layers are now known as the North American Atlas Framework (NAAF), and they provide a consistent, harmonized geographic framework for the display and analysis of thematic data at the North American scale.

The NAAF base layers are standardized geospatial data sets, with a scale of 1:10 million. Released for public access in June 2004, these base layers include political boundaries (international and state/provincial), major roads, railroads, populated places, hydrography (lakes, rivers, coastlines), glaciers and sea ice, and bathymetry (depths of water bodies). The completed base map layers are available for download from the online North American Environmental Atlas webpages, <http://www.cec.org/naatlas>. A North American watersheds base layer was also produced in a wall map format.

In October 2006, the National Atlas agencies, the Parties, and the CEC Secretariat formalized their working relationship through the creation of the North American Atlas Consultative Group (NAACG).

Over the last two years, this project has developed NAAF-compatible data layers for renewable energy capacity, marine and terrestrial ecoregions, pollutant release facilities, protected areas, priority conservation areas, important species ranges, elevation, land cover, and watersheds. Some of these data layers were developed in cooperation with other CEC projects, while other layers were contributed by the National Atlas agencies. All completed data layers and associated metadata are shared with the public through the North American Environmental Atlas webpages, <http://www.cec.org/naatlas/>. In the six months following its launch in mid-February 2008, this site has had approximately 10,000 visits, with significant spikes in traffic following the release of new map layers.

The CEC has also been active in exploring innovative map-based displays of environmental information from CEC project areas. These include several new print maps for the *Taking Stock* report series, interactive *Google Earth* layers of industrial pollution and species of common conservation concern, which have been featured via the *Google Earth* Outreach Showcase, <http://earth.google.com/outreach/showcase.html>, and a virtual tour of monarch butterfly sister sites for presentation at the most recent Council session.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

The key partners in this work are representatives of the national mapping agencies of the three North American countries—Natural Resources Canada, the USGS, and INEGI. These agencies have worked together to develop the base map layers and continue to produce North American maps of priority themes that are shared through the online Atlas. In addition, these mapping agencies provide publicity for the North American Environmental Atlas through their own webpages and activities (e.g. participation in international meetings and conferences).

Based on an identified priority to develop thematic layers for land cover, the CEC supports to a technical subgroup of the NAACG, which is developing a North American Land Change Monitoring System (NALCMS). The NALCMS produces annual land cover and land change information in a harmonized manner across North America. The NALCMS subgroup consists of representatives from the remote sensing and land cover groups of Natural Resources Canada, the USGS, INEGI, the *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* (CONABIO), and the *Comisión Nacional Forestal* (CONAFOR). The CEC facilitates the technical work of these partners. These remove sensing organizations have become important stakeholders and partners of the CEC mapping project.

This project has also partnered informally with international organizations and academic institutions whose outputs include global maps of environmental data. These have included McGill University in Canada and Clemson University in the United States, the Center for International Earth Science Information Network (CIESIN), NGOs such as the International Union for Conservation of Nature (IUCN), and international organizations such as the Global Precipitation Climatology Centre (GPCC). The CEC has supported these international mapping activities by incorporating into the North American Environmental Atlas key environmental thematic maps that they have developed. In 2008, these maps have included North American protected areas, precipitation, population density, and wetlands, as well as human impacts on marine ecosystems, among others. These arrangements are mutually beneficial to the CEC and the institutions contributing the data: the North American Environmental Atlas gains breadth by incorporating new information that supports the visualization of environmental issues on a continental scale, while the international participants gain a wider audience for their work.

Advisory Groups Related to this Project

The North American Atlas Consultative Group (NAACG) serves an advisory role for the project and provides a focal point for trilateral collaborative activities. It is composed of representatives from Natural Resources Canada, INEGI, and the USGS.

Rationale

Fulfillment of Strategic Objectives

This project is linked to the Information for Decision Making priority in the 2005–2010 Strategic Plan. The long-term goal for this priority is to support better decision-making by providing information on the key environmental challenges and opportunities facing North America.

The Strategic Plan specifically identifies the need for an initiative to provide for "the development over time of an online North American environmental atlas depicting environmental protection, conservation, biodiversity and other information on a continental scale." The role of the CEC has been to bring together the three governments' mapping experts to facilitate development of this atlas and to further the development of the Atlas through new maps of information from CEC projects and other priority thematic areas. The proposed work in 2009 will contribute to fulfillment of these information objectives by further increasing the breadth and depth of the North American Environmental Atlas content.

Information for Decision-Making

The type of information made available through this project is map-based. The project is primarily aimed at furthering the visualization, display, and communication of information on continental-scale environmental topics, through maps. Maps are not a substitute for reports and other environmental information, but serve as a complementary communications resource for decision makers (and the interested public) by simplifying the geographical patterns associated with environmental data. Maps can help decision makers visualize the geographic nature of environmental issues and bring important patterns to light. Because the information from the North American Environmental Atlas is depicted at the continental scale, its value as a tool for decision makers is at a broad level. The information can help decision

makers to identify opportunities for collective action as well as the areas in which to focus their efforts.

Trade and Environment

The role of this project in the context of trade and the environment is to further the understanding of trade and environment-related topics through map-based display of information, whenever feasible. An example of trade and environment data within the North American Environmental Atlas is installed renewable energy across North America.

North American Scope of the Project and Its Relevance to the Three Parties

This project supports the visualization of the North American environment through maps. The online North American Environmental Atlas includes information that is harmonized and seamless across the continent. Thus it differs from national mapping activities and even bi-national mapping activities. Bringing together information in this manner requires coordination between the Parties to harmonize and reconcile existing data for a seamless North American view. The mapping project allows the three Parties to more effectively visualize the shared North American environment and identify opportunities for collective work. Moreover, because the data in the Atlas covers each of the countries, the project enables the Parties to visualize their own environment in the context of North America.

CEC Niche and Value Added

The CEC plays a key role in bringing together and facilitating the harmonization of a range of environmental maps on the continental scale. To this end, a major role of the CEC in this project has been to convene the three countries' government experts, through the NAACG, NALCMS and other mapping initiatives (e.g. groundwater) and coordinate their cooperative efforts in developing new maps of priority environmental themes. In addition, the CEC seeks new sources of environmental information that can be mapped at a continental scale, explores methods for sharing map-based North American environmental information, and provides the completed data and maps to the public through the North American Environmental Atlas webpages.

Through this project, the CEC brings harmonized environmental data for North America and also facilitates the governments to continue to create new maps of priority environmental themes. Other mapping initiatives exist in North America at the national level (e.g. National Atlas of the United States, the National Atlas of Canada) and sub-national levels (e.g. state, provincial, county, and municipal), but their maps do not typically span the continent and are not usually harmonized with each other. While international organizations and environmental NGOs undertake mapping work, the data does not always cover the continent in a consistent way, and these maps are focused on specific themes.

Working with other project areas of the CEC has led to thematic maps that display a breadth of environmental information on a continental scale. Further, the CEC has identified and compiled North American data from international organizations, NGOs, and academic institutions and displayed this information in a manner consistent with the North American Environmental Atlas, to increase the breadth of the Atlas. The CEC has also actively explored and participated in the development of products for innovative mapping display, such as the *Google Earth* platform, and used these platforms to more broadly disseminate North American environmental information.

Linkages with Other CEC Projects

This project is linked to other CEC projects that produce information that can be displayed through maps at the continental scale. Examples include biodiversity projects (e.g., maps of protected areas, priority conservation areas, and ecoregions), the PRTR project (e.g., maps of pollutant release and transfer facilities, maps of emissions from PRTR facilities), and the air project (e.g., maps of power plant emissions and acid deposition). The online North American Environmental Atlas serves as a clearinghouse for most of these program-related maps, thereby drawing attention to the issues that the projects address and the continental scale of the topics.

Activities and Outputs

Key Activities

In 2009, the development of the digital North American Environmental Atlas will continue through six main areas of work:

- Strengthening collaboration among the Atlas and the environmental partner agencies of the three countries through an annual in-person meeting and regular conference calls. This will promote the identification of issues of common interest and foster improved exchange of

environmental mapping information.

- Supporting CEC project activities that have NAAF-compatible mapping. This work will supply the Atlas Framework with relevant environmental information based on CEC work in various areas—such as trade and sustainability, air quality, PRTR, and biodiversity—to better serve the needs of existing CEC user groups.
- Creating an outreach strategy to more clearly identify North American Environmental Atlas users and identify mechanisms to better promote the Atlas to these users.
- Supporting development of a North American Land Change System that will utilize remote sensing data and a harmonized land-cover classification system to produce annual land cover maps at a 250-meter cell resolution.
- Creating new map layers of environmental themes that are seamless, harmonized, and consensus-based, in priority areas identified by the NAACG.
- Strengthening the CEC Secretariat's capacity to use information assets to maximum benefit, with a particular emphasis on integrated, geo-referenced or GIS-based (geographic information system–based) information. This task aims to increase the understanding of the requirements for creation of additional harmonized North American geo-referenced data layers. It also seeks improvements in the utility of CEC information products through, for example, the creation of interactive mapping tools using *Google Earth* and Google Maps.

Target Groups

The primary target audiences for this project are 1) the general North American public with an interest in understanding North American environmental issues, 2) users of other CEC reports and background papers who may be better served though enhanced mapping capacity, 3) researchers in environmentally related disciplines (such as ecology, earth sciences, biology, and geography) who may be interested in using harmonized North American environmental data, and 4) decision-makers with an interest in understanding the continental scope of environmental topics. In 2009, an outreach activity of this project will seek to more clearly identify the audience groups within the general North American public, e.g. students and educators, environmental NGOs, etc.

Partners, Stakeholders

Key partners in this project in 2009 are the mapping agencies (USGS, Natural Resources Canada, INEGI) from the three countries. Partners in the land change monitoring activity include experts from the three countries' remote sensing and land change organizations: Natural Resources Canada, USGS, INEGI, the *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* (CONABIO), and the *Comisión Nacional Forestal* (CONAFOR).

In 2009, the North American Environmental Atlas will incorporate maps of North American forests; in developing these maps, the CEC is partnering with the North American Forestry Commission (NAFC) of the FAO. This project will also work with experts from the groundwater agencies of the three countries to finalize a North American aquifers map.

International organizations, research institutions, and environmental NGOs whose outputs include maps that cover North America are also important partners. North American maps of environmental data developed by other organizations will continue to be important sources of new information for the North American Environmental Atlas.

Leveraging

In 2009, this project will continue to leverage CEC resources by facilitating the efforts of mapping experts from a variety of government agencies to produce new environmental thematic maps. In 2009, government partners working in remote sensing and land cover, groundwater, and forests will all contribute new maps to the North American Environmental Atlas. In these initiatives, the CEC will continue to play a leadership and facilitation role while the government agencies will contribute their technical and cartographic expertise. Moreover, these agencies will promote the Atlas, on their own webpages and through their participation in international meetings and conferences.

Outside of government, the project will continue to benefit from the in-kind use of North American environmental information from a variety of sources, including research institutions and international organizations. In 2009, it is expected that for several priority map layers already under development by academic institutions, limited CEC funding may be leveraged to help complete a much larger effort.

The CEC has publicized and more widely disseminated some of its mapping

products through the use of freely available mapping platforms, in particular *Google Earth*. Several thematic maps developed by the CEC were featured in the *Google Earth* Outreach Showcase. While leveraging of funding from the private sector is not anticipated, use of the KML file format enables CEC map products to be viewed interactively in a variety of freely available mapping applications including *Google Earth*. This serves to increase the accessibility and utility of the North American Environmental Atlas.

This project will continue to encourage map-based display of environmental information, whenever feasible, in other CEC projects, thereby adding to the breadth of the North American Environmental Atlas while enhancing the work of other projects. In 2009, new maps from CEC project activity will include North American power plants, marine protected areas, and hazardous waste generating and receiving facilities.

Outputs and Associated Timelines

The following map layer outputs are planned for development, completion, and inclusion in the online North American Environmental Atlas in 2009:

- Power plant locations and emissions
- Watershed loadings of selected PRTR chemicals
- Marine protected areas
- Marine priority conservation areas in eastern North America
- Hazardous waste generating and receiving sites
- Sites of potential avian species impact from wind power development
- North American land cover (2006) and land cover change (2005-2006)
- Aquifers/groundwater
- Forests
- Greenhouse gas flux

Additional outputs in 2009 will include:

- Annual in-person coordination meeting and monthly conference calls of national Atlas agencies and mapping agency partners
- Identification of proposed strategic priorities for 2010-2015 strategic plan
- Outreach strategy for use by CEC Secretariat and NAACG
- Dissemination plan for use by CEC
- North American Environmental Atlas outreach materials
- Wall map displaying environmental thematic data

In 2009, this project will investigate new hosting arrangements for North American Environmental Atlas data. The expected timeline for completion of this output is 2010.

Anticipated Outcomes and Performance Indicators

Direct Outcomes:

- Regular collaboration among the three National Atlas programs and other mapping agencies with capacity to contribute to the North American Environmental Atlas.
- Development of additional map layers and geo-referenced datasets.
- Ongoing posting and maintenance of geospatial data, map layers, and metadata on webpages.

Performance Indicators:

- Continued endorsement by and participation of the National Atlas programs (information available)
- Number of new map layers added to the North American Environmental Atlas each year (baseline and current information available)

Intermediate Outcomes:

- Identification of appropriate niche for CEC mapping activities.
- Consensus on priorities for improvements to existing products and understanding of requirements for new thematic layers.
- Successful collaborative arrangements, including processes to maintain, update, and disseminate existing products.
- Digital atlas displaying continent-wide environmental topics, available through CEC website.
- More effective use of maps and map-based displays in CEC reports and information products.
- Wider awareness of Atlas and CEC mapping products.
- Additional attention to North American–scale research questions by

academics and other researchers.

Performance Indicators:

- Traffic on Atlas pages of CEC website (current information available)
- Use of Atlas map layers in poster presentations and academic research (no information available)
- Specific use of Atlas maps in CEC reports (current information available)

Final Outcomes:

- Common approaches, comparable data and information across North America on continent-wide environmental topics.
- Improved visualization and understanding of North American environmental topics through mapping products.
- Stronger regional information systems.
- Facilitation of geographic analysis and decision-making on a broad range of environmental topics.

Performance Indicators:

- Utilization of common approaches, comparable data and information consistent with the NAAF
- References to the NA Atlas, reproduction of NA Atlas map layers, and use of NA Atlas data and products, in print and web media sources

Timetable, Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

At current levels of project funding and staffing, it is reasonable to expect broad coverage of North American environmental themes within two to four years. This schedule may be accelerated through prioritization of mapping tasks by other CEC project areas and through in-kind support from mapping agency partners and international organizations.

Over the next two to four years, the CEC expects to produce additional environmental thematic layers and pilot applications of innovative mapping products—using coverage at a scale of 1:10 million and/or 1:1 million—of environmental topics with trilateral interest, North American scale, and readily available geo-referenced data.

Possible future topic areas include the following:

- Renewable energy potential (solar, wind, biomass, hydro, geothermal).
- Updated renewable energy capacity.
- Population and distribution of invasive species.
- Population and distribution of threatened species.
- Wetlands.
- Air quality.
- Pollutant monitoring sites and data.
- Soils.
- Geology.
- Trade flows.
- Transportation modes and infrastructure.
- Indigenous areas.

It is expected that the CEC will continue to provide the coordination and leadership of trilateral activity to allow this work to continue to be developed. This project will continue to create networks among mapping experts in the key mapping agency partners and among subject matter experts (e.g., forest mapping and land cover mapping) in the three countries.

Target End Date for CEC Involvement

The optimal arrangement for data hosting (among the CEC and project partners) will be examined in 2009. Prior to 2012, the CEC might modify its involvement in hosting the data if it is determined that a different organization or arrangement is preferable for hosting the North American Environmental Atlas.

By 2012, the North American Environmental Atlas should contain a breadth of environmental information on the continental scale, available to the public for download in a variety of file formats. The CEC anticipates an ongoing role in facilitating the trilateral development of new maps of priority information as identified by the three governments, maintaining the existing maps on the North American Environmental Atlas, regularly updating the data underlying the maps, and incorporating new maps as new data becomes

available on different environmental themes.

Sustainability Beyond

After 2012, the role of the CEC in mapping North American environmental issues is anticipated to consist of maintenance and updating of the North American Environmental Atlas, as well as facilitation of trilateral collaboration to improve the Atlas.

Longer-term project sustainability, in particular the development of new map layers by the national mapping agencies and the continued improvement of existing data, is dependent upon the perceived value of data harmonization efforts, the utility of innovative map displays and interactive applications, and national priorities.

Communications

The target audiences are: 1) users of other CEC reports and background papers who will be better served though enhanced mapping capacity, 2) researchers in environmentally related disciplines (such as ecology, earth sciences, biology, and geography) who may be interested in using harmonized North American environmental data, 3) decision-makers with a need to understand the continental scope of environmental topics, and 4) the general public with an interest in understanding North American environmental issues.

The web pages for the North American Environmental Atlas serve as the primary communications mechanism, with periodic announcements to CEC list-serve members about new layers. In addition, the CEC incorporates currently available maps into CEC information products such as the *Taking Stock* series and the *North American Mosaic* report. The *Google Earth* Outreach Showcase has highlighted Atlas products in the past and will continue to be targeted as an outreach tool for maps in the KML format. The project manager and NAACG members take advantage of their ongoing participation in conferences and workshops to raise awareness of the North American Environmental Atlas.

It is anticipated that print versions of selected NAAF data layers or feature maps will be produced on a periodic basis for widespread distribution to the public and stakeholders. Distribution mechanisms will include: direct distribution at conferences and meetings (e.g. of geographers, the mapping community, and of environmental policy makers and scientists), distribution by CEC staff at meetings and conferences (e.g. at international meetings, at meetings at universities and with NGOs), and through the CEC website by request. Past examples include the print versions of the North American base map and the North American watersheds map. In 2009, the Secretariat and mapping partners will explore the possibility of a new, thematic, printed map.

In 2009, the NAACG, working with the CEC Secretariat, will complete a communications/outreach strategy to guide the planning and development of various North American Atlas products, e.g., a printed wall map and other communication materials. Such a strategy would seek to raise awareness of and participation in the North American Environmental Atlas initiative by the target audiences throughout the region.

Information Management

Upon completion, all metadata, shapefiles, keyhole mark-up language (KML) file formats, and geospatial databases developed by the CEC will be maintained on the North American Environmental Atlas webpages. This will serve both archiving and distribution functions for mapping related data files. Some layers (in particular, base layers) may be mirrored on mapping agency partner websites; the *Atlas of Canada* has also offered to explore the possibility of offering interactive North American thematic maps through its website.

At the outset, CEC interactive content will be limited to files produced in a *Google Earth* KML format. During this year, there is a developmental task to explore the potential of using ArcGIS Server and other data hosting arrangements for interactive access to data and Web mapping.

The CEC currently maintains licenses for ArcMap, *Google Earth* Pro, and Arc2Earth, but has limited in-house capacity for substantial analytical or cartographic work. To the extent that new thematic layers and mapping products are produced by the CEC rather than through in-kind assistance by mapping agency partners, the CEC will require contracted GIS technical services which are not currently available in-house.

It is expected that mapping requirements will be incorporated into other contracts for CEC projects, using the project manager for Environmental Information and NAAF guidance documents as references.

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Project 2	**Reporting CEC Results and Performance 2005–2010**	**Responsible Project Manager at the CEC Secretariat**	Evan Lloyd
Planned Allocation	C$165,000	**Working Group(s) associated with this work**	General Standing Committee (GSC), State of the Environment Advisory Group (SOEAG)

Objective of Project

This project has four objectives:

- To prepare a comprehensive report on the results and accomplishments the CEC has made in fulfillment of its five-year 2005–2010 Strategic Plan, of which a preliminary and high-level summary of results would be published in time for the 2009 Council Session
- To review and measure in a comprehensive manner the performance of CEC projects in meeting the specific goals and objectives of the 2005–2010 Strategic Plan.
- To provide the Council, JPAC and the Secretariat with an analytical foundation for the purposes of expressing the goals, objectives and performance measures to be included in the CEC's next strategic plan, 2010–2015.
- To assist the Parties and the Secretariat in concluding the ongoing work of refining a monitoring, evaluation and reporting framework.

Certain tasks under this project also support the continuing development of the CEC's reporting on the state of the North American environment.

Background

Project History and Foundation

In 1994, the CEC Council adopted three broad priorities for the cooperative work program of the CEC (the Puebla Declaration[1]):

- Information for Decision-making;
- Capacity Building; and
- Trade and Environment.

Subsequently, and to advance these priorities, the Council adopted the Strategic Plan for the Commission for Environmental Cooperation 2005–2010.[2] This plan embraces specific five-year goals and objectives as well as several multi-year cooperative initiatives to accomplish them.

The five-year goals under these priorities are to:

- support better decision-making by providing information on the key environmental challenges and opportunities facing North America;
- strengthen the capacities of the three countries to manage environmental issues of common concern; and

[1] <http://www.cec.org/pubs_docs/documents/index.cfm?varlan=english&ID=1551>.
[2] <http://www.cec.org/pubs_docs/documents/index.cfm?ID=1761&varlan=english>.

- promote policies and actions that provide mutual benefits for the environment, trade, and the economy.

The Strategic Plan further articulates twelve specific multi-year program objectives in support of these priorities. Together, the plan states "these initiatives comprise a focused, integrated and coherent effort to produce visible and concrete results."

Since 2006, each of the CEC's subsequent annual operating plans has been developed in such a manner that each project has been intended to accomplish one or more of these stated objectives.

The Council has indicated that, for planning purposes, the project year 2009 will mark the culmination of the current Strategic Plan. A new five-year strategic plan (2010–2015) is expected to be developed and adopted by Council in 2009.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

The key stakeholders associated with this project are the Council and other constituent elements of the Commission for Environmental Cooperation.

Advisory Groups Related to this Project

Activities and outputs of this project will be conducted in collaboration with the CEC's General Standing Committee and the State of the Environment Advisory Group.

Rationale

Periodic objective analysis of achievement in the delivery of a multi-year program of work is widely recognized as organizational best practice, both to inform management with regard to performance as well as to provide input into future planning processes. With the "completion" of the 2005–2010 Strategic Plan, the logic of developing the succeeding plan demands a reliable measure of the efficacy and impact of the previous plan and the years of project activity dedicated to reaching its stated objectives. Moreover, the measurement and assessment of results would provide valuable and timely information for the purpose of communication with the CEC stakeholders and audiences.

A comprehensive strategic planning framework will include five elements:

1. A Strategic Plan
2. An Operational Plan
3. A Management Approach
4. An Implementation Plan
5. An Evaluation and Monitoring Framework

The CEC has made significant progress in the adoption of the first four items. Although a comprehensive planning, monitoring, evaluation and reporting framework has been the subject of discussion and review since 2004, this matter remains incomplete and its completion remains on the agenda of the Council's General Standing Committee and the Secretariat.

Fulfillment of Strategic Objectives

While not targeting support to any one strategic objective this project is intended to support the assessment of the CEC's effectiveness in achieving all 2005-2010 objectives, and to inform future work.

North American Scope of the Project and Its Relevance to the Three Parties

Results will be expressed in North American terms and will inform both the Parties and the CEC as a whole.

CEC Niche and Value Added

It is assumed that the CEC is the appropriate body to measure and report upon the performance of the 2005-2010 Strategic Plan.

Linkages with other CEC projects

- The results of this project will be of use throughout the CEC to inform all audiences and partners of the accomplishments and role of the CEC 2005-2010.
- The results of this project will support and inform 2009 Strategic Planning activity within the CEC and the enhancement of future operational plans.

Activities and Outputs

This project will have several components, including the following:

- Measurement of the progress, at the annual Operating Plan project level, against stated outcomes and performance indicators for the years 2005–2009, inclusively.
- Measurement of aggregated results in the case of multi-year initiatives (i.e., NAMPAN, SMOC,[3] enforcement compliance).
- Measurement of the progress in achieving the objectives and targets of any specific multi-year program-specific strategic plans (i.e., the Trade and Environment Strategy, Biodiversity Conservation Strategy).
- Assembly of the above measures, and construction of a comprehensive report on the CEC's performance in achieving or advancing towards the specific program objectives articulated in the 2005–2010 Strategic Plan.
- Supplementary analysis to more effectively measure the impact of CEC projects where the stated five-year program objectives or subsequent performance indicators are so insufficiently robust or defined as to frustrate any meaningful expression of accomplishment or not. This work may involve surveys, audits, interviews and the assessment of secondary action on the part of the Parties and of other collaborators who either participate in the delivery or hold direct responsibility for environmental action or policy.

SOE related tasks:

- Evaluation of the 2008 Mosaic report on the state of the North American environment and identification of priorities for future state of environment (SOE) reporting.
- Investigation of the feasibility of developing North American environmental indicators for future SOE reporting.

Outputs include the following:

- A clear report on the results of the CEC's activities 2005–2010.
- A preliminary version of the above, containing high-level conclusions and assessment for presentation by the Council.
- Clarity of outcome responsibility between the CEC and the Parties for CEC-related activity.
- Enhanced understanding of the effective capacity of the CEC to accomplish the goals of NAAEC.4
- Support for the selection and definition of goals, objectives, and performance measures in the CEC's 2010–2015 Strategic Plan.
- Support for the completion of a monitoring evaluation and reporting framework for the CEC.
- Meeting of the SOE experts and identified priorities for future CEC work on SOE reporting.
- Guidance document summarizing opportunities for CEC in ongoing SOE reporting and exploring feasibility--in terms of time and resources required--of North American environmental indicators development.

Activities include the following:

- Agreement of project methodology, including primary research (comparison of objectives to reported results in Strategic Plans, Operating Plans, and CEC progress and other reports) and secondary research (to bridge data and reporting gaps in the above).
- Development of a work plan and management responsibility.
- Identification of contract and other staff support.

Target groups

- Council
- Parties
- Affiliated agencies
- JPAC

[3] NAMPAN—North American Marine Protected Areas Network; SMOC—Sound Management of Chemicals.

[4] North American Agreement on Environmental Cooperation.

- CEC public constituencies
- Provincial/State officials

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Preliminary results report (June 2009) that communicates the key accomplishments of the CEC in the preceding five years. This report will contain a compelling set of results, which will communicate the importance of the CEC's role and work, and it will complement any expression of the goals and results expected from the succeeding five-year strategic plan.
- Comprehensive report (November 2009), which includes both primary and secondary research results from the CEC's project-by-project evaluation of results assessed against the goals and targets of the 2005–2010 plan.
- Proposed approach for future SOE reporting, including rationale and timeline.

Performance Indicators

- Completion of the preliminary results report, June 2009

Intermediate Outcomes

- A critical assessment of the effectiveness of the CEC's work compared to goals and targets. This analysis is essential to the credibility and quality of the CEC's next five-year strategic plan.
- Guidance document for continued North American SOE reporting by the CEC.

Performance Indicators

- Completion of the final assessment document
- Next report on state of North American environment.

Final Outcomes

- A higher degree of confidence in the CEC's unique and important role in the protection and enhancement of the North American environment.
- Greater understanding of the state of the North American environment as well as trends over time.

Timetable, Project Completion and Sustainability Beyond

- Fall 2008: project development and preparation
- November–April: primary and secondary research
- May–June: preparation of preliminary report for Council 2009
- June–November: completion of final assessment
- Fall 2009: incorporation of revised monitoring and evaluation framework elements according to new strategic plan in 2010; draft Operational Plan; and project descriptions (first year of implementation of the CEC's next five-year strategic plan)

SOE

- Spring 2009: meeting of SOE experts
- Summer/fall 2009: summary of SOE experts' advice; development of guidance document for continued North American SOE reporting, to include an overview of the feasibility of environmental indicators development.

Communications

The high-level report and the assembly of results of CEC action have the potential to create compelling communications material for utilization by the Council and the CEC as a whole. Concise and comprehensive results will inform key messages for the CEC.

Information Management

No immediate impacts are expected upon the CEC's information management framework, although it may emerge that management of this resource can play an enhanced role in the monitoring and reporting of project activity and results.

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Project 3	**Environmental Assessment of NAFTA**	**Responsible Project Manager at the CEC Secretariat** José Carlos Fernández
Planned Allocation	2009: C$200,000 Completion of 2008 Outputs: C$15,000 Total: C$215,000	**Working Group(s) associated with this work** Trade and Environment Working Group

Objectives of Project

The objective of the project is to document, analyze and understand the environmental effects of trade liberalization in North America. In particular, to prepare a comprehensive report that will take stock of findings to date, identify gaps and prioritize data needs to inform the future work of the CEC. This assessment will include identification of opportunities to improve the approach used in assessing the environmental effects of NAFTA, as well as the development and implementation of the CEC's 2010-2015 Strategic Plan.

This project will also support the ongoing collaboration among trade and environment officials of the three countries with a view to improve regional and national coordination, including between the CEC and the NAFTA Free Trade Commission (FTC).

Background

Project History and Foundation

The CEC's work thus far has contributed to better understanding of trade and environment linkages, including the greenhouse gas emissions associated with trade activity; improved and informed environmental reviews of future trade and investment agreements by the Parties; and improved environmental assessments of NAFTA by the CEC and the Parties. These benefits are expected to continue to accrue and to lead to greater policy coherence both at the domestic and regional levels in North America by helping the Parties make better policy choices concerning trade and environment issues. They will also help the CEC direct future work. The project will further provide the CEC and the Parties with improved tools to conduct assessments on the environmental effects of NAFTA.

The findings of a 2008 review[1] highlight the value of the CEC's work to date and the need to assess future work in the context of deeper economic integration and emerging environmental issues and drivers of change that will impact trade and the environment. These include: (1) climate change and energy; (2) environmental standards, competitiveness and the possibility of green protectionism; (3) shifting consumption and production patterns; and (4) accelerating globalization and changing public opinion. As 2009 marks the end of the CEC's current five-year planning cycle, it also represents an opportunity to take stock of the assessment work with a view to address the findings of the 2008 JPAC and Trade and Environment Working Group review.

In terms of process, the review noted that government officials' participation at symposia had dropped significantly, coupled with a generally low level of private sector and international experts' participation. Better targeting of participants and the development of partnerships with other organizations was suggested. In addition, the Symposium in its current form was found to be a limited vehicle in terms of outreach to the broader public. It was suggested that the output of the assessment work could lead to the publication of a new flagship publication such as the CEC's *Taking Stock* report to increase outreach and convey results to new audiences.

[1] http://www.cec.org/files/PDF/JPAC/JPAC-SymposiaLessons-fin-e.pdf

Further background on the CEC's ongoing environmental assessment of NAFTA can be found at: <http://www.cec.org/symposium>.

Key stakeholders, Resource Leveraging, Partnerships (to date)

Stakeholders in this effort are the academic community, nongovernmental organizations (NGOs) inter-governmental organizations (IGOs), and government representatives involved in assessing the environmental effects of trade liberalization.[2]. Over the years, the CEC has collaborated with most of the stakeholders in the field of *trade and the environment* in general, and NAFTA in particular. The CEC Secretariat will explore the new partnerships and leverage resources for this project; this could include, initially, the institutions represented in the proposed Panel of Experts (PoE)

Advisory Groups Related to this Project

The Trade and Environment working group (TEWG) is expected to continue to provide substantive input and guidance to this project.

Rationale

This project responds directly to the NAAEC Article 10(6)(d)[3], which commits the Parties to consider the environmental effects of NAFTA on an ongoing basis. In this instance, this project aims to accomplish this by addressing the findings of the above mentioned review and to create the foundations for future CEC work in its next planning cycle.

In essence, this project proposes a new approach, beginning in 2009, with a Panel of Experts mandated to develop a report of *Environmental Assessment of NAFTA at 15* as its core focus. This shift from an event-based process to expert-based research will, among other things, allow the CEC to take stock of the work to date, designate upcoming environmental issues, assess cumulative environmental effects and provide recommendations to educate and inform future assessment work. In lieu of broad episodic events, the PoE could constitute a platform to engage with a smaller, but highly relevant set of stakeholders (academic, business, and policy decision-makers in a roundtable format). This format would free up resources to disseminate the results in a wider range of forums, such as roundtables, workshops and conferences.

This approach will result in high quality outputs that will advance and take stock of work to date. This includes a review of the existing analytical framework, addressing the implications of environmental trends in North America, assessing cumulative environmental effects, better engaging partners and audiences for this work, enhancing its utility for trade-policy decision-makers, as well as informing more general and useful information outputs for the CEC's core *Trade and Environment* activities. In its development this work will consider existing work of environmental assessments on trade, particularly as developed by the CEC, and seek to avoid duplication.

The shift from an event-based approach to an expert-based research process requires consideration of complementary activities to ensure the involvement of the wider public. This issue will be considered by the Trade and Environment Working Group as well as the PoE. Options include open consultations through an online forum, blogs, collaborative platforms, and sub-group meetings.

Fulfillment of Strategic Objectives

This project contributes directly to fulfillment of the CEC's 2004 Puebla Declaration[4] objectives as well as specific Trade and Environment objectives of the CEC's 2005–2010 Strategic Plan.[5]

Information for Decision-making

Ultimately, the findings of this work are intended to support government and trade officials in making better policy choices concerning trade and environment issues.

Capacity Building

N/A

Trade and Environment

The basis of this project addresses directly the assessment of environmental effects of trade.

[2] For each previous Symposia, the CEC posted on its website a list of all authors and a list of participants http://www.cec.org/symposium/
[3] NAAEC. http://www.cec.org/pubs_info_resources/law_treat_agree/naaec/naaec04.cfm
[4] http://www.cec.org/files/PDF/COUNCIL/Puebla-Declaration-2004_en.pdf
[5] Looking into the Future. Strategic Plan of the CEC 2005-2010. http://www.cec.org/files/PDF/PUBLICATIONS/2005-2010-Strategic-plan_en.pdf. See section 5.3. page 12.

North American Scope of the Project and Its Relevance to the Three Parties

The PoE will include members from each of Canada, Mexico and the US. The project will assess the environmental effects of trade within the three countries and for North America as a whole. The recommendations will be relevant for the three Parties.

CEC Niche and Value Added

NAAEC Article 10(6)(d) stipulates that the CEC Council shall, among other things, consider on an ongoing basis the environmental effects of the NAFTA.

Accordingly, over the years, the CEC has developed a significant number of high quality studies on the topic which have earned it regional and international recognition for its work in this area. These include publications on the environmental impacts of trade liberalization in North America and the empirical examination of the most common critical hypotheses concerning the impact of NAFTA on the environment.

The CEC is well positioned to now establish a Panel of Experts that will continue this work and assess the environmental effects of NAFTA at 15. To the best of the CEC's awareness, this work is not being done or proposed by other institutions at this time.

Linkages with other CEC projects

This project will put forward collaborative efforts reflected in the work program (i.e. links with energy, transportation, etc.)

Activities and Outputs

Activities

1. Establish an independent ad-hoc Panel of Experts as the lead group responsible to assess the environmental effects of NAFTA at 15 and prepare a report on its key findings. The final structure of the report will be defined during implementation of the project but may include a review of the state of play in relation to environmental assessment of trade in the NAFTA region, identification of emerging issues, and gaps and data needs for this work, together with a set of recommendations.

2. Continue supporting the collaboration among trade and environment officials, particularly through the TEWG.

The TEWG will develop specific terms of reference for the work of this group, expected to include:

- Take stock of current knowledge on environmental effects of the NAFTA over the past 15 years and produce a high quality report ;
- Identify areas of strength and weakness of current impact assessment in addressing cumulative environmental effects;
- Identify most relevant and outstanding questions for future CEC work; and
- Provide recommendations to the TEWG on how to improve the current process for assessing the environmental impacts of the NAFTA (this could include format of future work, target audience, maximizing utility to trade-policy decision makers, potential participants, design of a criteria-based approach to selecting the issue for future work) and recommendations on the dissemination of findings and ways to improve public feedback.

The TEWG will appoint PoE co-chairs to lead and coordinate the work. The PoE will develop its own work program and procedures to achieve its mandate. It is expected to engage with the stakeholders and assist in conveying results in various fora including partner universities, research institutions and think tanks (e.g., networks, events, conferences, lecture series in universities, etc.). Decisions will be made by consensus and, while the meetings of the PoE will be closed, the outputs of the work are presumed to be public.

While the ultimate output for this work is planned for mid 2010, the PoE is expected to produce an interim report in 2009 that may inform the development or implementation of the CEC's 2010–2015 Strategic Plan.

Target Groups

(The2009 output is an interim report with limited distribution to the Parties and working groups. Target groups will be defined for the 2010 final report.)

Partners, Stakeholders

The PoE will be an advisory body comprised of 9–12 multi-stakeholder representatives selected on the basis of expertise and geography. Ideally, the PoE would encompass private, public, academic, NGO and IGO sector members. Each would serve in a personal capacity and not represent an organization or country. The PoE will have a limited time mandate (18 months) and its work will be overseen by the Trade and Environment Working Group (TEWG).

Collaboration with relevant international organizations such as OECD, UNEP, UNCTAD, and the WTO will promote synergies. Many of these organizations have already been identified and have been involved in past CEC activity. The PoE will also map relevant partners.

Leveraging

The Panel of Experts provides an opportunity to build longer-term relationships and partnerships with academic experts and research centers across North America, and to leverage additional resources. The PoE will also explore collaboration opportunities on an ongoing basis (e.g., allowing academic institutions in North America to actively participate in areas within their mandate that would require analysis, pilot studies, case studies, follow-up and scientific or technical discussion).

This project proposal will continue supporting the existing trade and environment collaborative work and seek to take advantage of opportunities to strengthen collaboration with the FTC.

Outputs and associated timelines

- By mid 2009, the Panel of Experts will provide an interim report.
- By mid 2010, a master document on the environmental effects of NAFTA at 15 and recommendations to educate and inform future assessment process will be produced.

Anticipated Outcomes and Performance Indicators

Direct Outcomes:

- Improved understanding of the environmental effects of trade liberalization;
- Increased awareness of findings by general public and targeted audiences such as government officials, NGOs, private sector, local communities, scientific and academia;
- Identification of gaps, emerging issues, prioritization of data needs and approaches to inform future work in relation to environmental assessment of NAFTA;
- Production of a seminal work that will provide an indication of the state of play in relation to environmental impacts of trade in the NAFTA region; and,
- Develop a *roadmap* on how best to address environmental concerns that may be identified during the course of this work.
- Assessment of whether the environmental provisions of NAFTA continue to reflect best practices in trade agreements.

Performance Indicators

- Completion of 2009 interim report and 2010 final report

Intermediate Outcomes:

- Increased capacity of the Parties and stakeholders to address environmental impacts of trade and to promote synergies between trade and the environment.

Performance Indicators:

- Report being used and referenced by the NAFTA Parties and other stakeholders in their development of their policies and actions related to trade and environment, including CEC activities.

Final Outcomes:

- Effective actions to ensure trade liberalization contributes to sustainable development, as called for in NAFTA.

Performance Indicators:

- Actions being developed and implemented on the basis of the findings from this work.

Timetable, Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

The PoE will be assembled within the first quarter of 2009 and is expected to have an initial meeting during the first half of the year. Regular conference calls will be held among TEWG members and at least two face-to-face meetings will be held.

An interim report is scheduled by mid 2009.

Target end date for CEC Involvement

The CEC's direct support for this project is expected to end mid 2010.

Sustainability Beyond

Depending upon the success of this initiative and the depth of interest in the general topic it is anticipated that PoE partners and associated academic and research centers may continue important aspects of this assessment.

Communications

Communications on this project in 2009 will focus on continuing to disseminate the 2008 symposium results, publishing the proceedings and encouraging awareness and follow-up with key audiences. The 2009 interim report of the PoE will be disseminated to key partners in support of the work of this group.

Materials promoting the symposium will go primarily to policy makers from the three governments' environment and trade agencies, academics (Research centers, Universities, Institutes) and NGOs that have participated over the years in the Symposia.

The broad conclusions and lessons learned from this work will be adapted for dissemination to a non-expert audience.

The accumulated knowledge of the CEC takes greater effect when subjected repeatedly to assessment in collaboration with research and study centers of high performance. Materials produced and published by the CEC, including key deliverables by the PoE, are more likely to be updated and disseminated when accessed by scholars. Partnership development with academic networks, in a more systematic manner, will provide ad hoc venues to boost usage of these materials and contents.

It is assumed that the work of the PoE itself will provide the opportunity to engage key audiences or otherwise communicate their work and that of the CEC. To that end other outreach activities will be decided on the basis of the work plan of the PoE, including the opportunity to promote participation and awareness of PoE activities.

Distribution: General
C/OP09/Draft3/PROJ4
ORIGINAL: ENGLISH

Project 4	**Supporting Sectoral Environmental Sustainability and Competitiveness**	**Responsible Project Manager at the CEC Secretariat**	José Carlos Fernández
Planned Allocation	C$125,000	**Working Group(s) associated with this work**	Trade and Environment Working Group

Objective of Project

This project aims to gain further knowledge and policy insights on the link between environmental sustainability and North American competitiveness and to identify specific options that would enhance environmental sustainability and competitiveness in practice.

Background

Project History and Foundation

In 2008, the CEC initiated scoping work in the area of environmental sustainability and competitiveness. Studies were commissioned to better understand the link between environmental sustainability and economic performance and to identify opportunities to promote their mutual supportiveness.

While not directly referred to as *competitiveness*, the CEC has done significant work to promote policies and actions that simultaneously improve environmental and economic performance of the private sector. This includes, for example, work to document pollution prevention activity,[1] exploring drivers for the adoption of environmental management systems,[2] and the link between environmental performance and business value,[3] as well as practical explorations such as work on disclosure of environmental information in financial statements.[4] More recently, the CEC has gathered practical experience on these issues with work on the greening of supply chains as well as sector specific work with the auto and electronics[5] sector in North America. This project builds on that work and will also take stock of significant work by other organizations, including the OECD.

In 2008, a number of sectors were explored (Chemicals, Transportation, Electronics and Pulp and Paper) and a workshop on Environmental Sustainability and Competitiveness was held in the context of a meeting of the CEC's Joint Public Advisory Committee explored the link between environmental sustainability and competitiveness, the key factors affecting that relationship, and assessed empirical evidence to identify opportunities to ensure mutual supportiveness. With this project the CEC will initiate alternative ways to communicate with a wider audience, including blogs and webinars. New channels will be instrumental in ensuring the involvement of a wider audience.

[1] See for example, CEC (1996) Status of Pollution Prevention in North America. http://www.cec.org/files/pdf/POLLUTANTS/pole_EN.pdf as well as CEC (2004) Moving Forward with Pollution Prevention in North America: A progress update. http://www.cec.org/files/PDF/POLLUTANTS/CEC-MovingForward_en.pdf

[2] CEC (2005) Successful Practices of Environmental Management Systems in Small and Medium-Size Enterprises Commission for Environmental Cooperation
A North American Perspective http://www.cec.org/files/PDF/LAWPOLICY/EMS-Report_en.pdf

[3] Ganzi, JT, Steedman, E. and S. Quenneville (2004) LINKING ENVIRONMENTAL PERFORMANCE TO BUSINESS VALUE: A North American Perspective, http://www.cec.org/files/pdf/ECONOMY/Linking-Env-Performance-BP_en.pdf

[4] CEC (2003) Environmental Disclosures in Financial Statements: New Developments and Emerging Issues, http://www.cec.org/files/pdf/ECONOMY/NYC-cec-unepfi_en.pdf

[5] See Regular Session of the Joint Public Advisory Committee 06-01. Working meeting on the North American Clean Electronics Pollution Prevention Partnership & SME workshop, 28–29 March 2006. http://www.cec.org/calendar/details/index.cfm?varlan=english&ID=1996

Advisory groups related to this project

The CEC's Trade and Environment Working Group will continue to oversee this work. However, recognizing intense activity by a number of other actors, as well as the need to further involve stakeholders from the sectors of focus, this project proposes to create an Advisory Group.

In terms of composition, the group will include, at a minimum, government officials from areas related to competitiveness and environment; additional members could include industry representatives from each country (possibly through the competitiveness councils), as well as representatives from international organizations and environmental NGOs. This is intended to be a small group to advise the project, which will continue to be under the supervision of the TEWG.

This group will assist in refining the project approach, incorporating the findings from the studies and the workshop developed in 2008 and assist in the creation of the task forces for each sector that the Parties select to focus their work. Task forces may include, depending on the subject area, industry experts, NGOs and academics in addition to government representatives. The CEC Secretariat will engage industry early on in the process to ensure that action plans have adequate feedback and involvement from the business community. The use of webinars, blogs and other communication strategies will be used to ensure that appropriate audiences are engaged at a relatively low cost.

The primary task of the Advisory Group will be to assist in the review of current outputs and in the identification of areas of opportunity to develop specific action plans through the task forces.

Rationale

The environmental challenges of North America are significant and the cost of failing to introduce effective policies can be considerable. At the same time, there is concern that the economic costs of such actions may also be significant, requiring a balance of both objectives. Evidence suggests that opportunities exist to promote both improvements in environmental performance and economic performance. Work in 2008 was aimed at improving our understanding of the nature of the link between environmental and economic performance as well as competitiveness of North American business in order to identify opportunities and barriers to promote such positive synergies.

In 2009, this project aims to consolidate and complement this work and to develop task forces and action plans to act upon its findings in specific sectors or addressing specific cross-sectoral issues (e.g., eco labeling). Further studies will be developed, as necessary, to provide additional knowledge and policy insights into environmental sustainability and competitiveness.

The project will also produce action plans to translate the findings into action. The plans will identify relevant opportunities which may be implemented through voluntary industry initiatives, policy actions or both.

This project also aims to support the work of the NAFTA Free Trade Commission (FTC) on addressing increasing pressures on North American competitiveness, with particular attention to the trade aspects, including relevant tariff and non-tariff barriers. This project therefore addresses the culmination and achievement of these CEC efforts.

Some of the key questions which will be addressed within the scope of this work are:

- What are the main policy drivers (including, in particular, trade related) to consider in the link between environmental sustainability and competitiveness?
- What do policy drivers include? For example–tariff and non-tariff barriers, standards, etc.
- How are these policy drivers affecting that link?
- What are the key obstacles to achieving mutually supportive outcomes from a competitiveness and environmental perspective?
- What competitiveness concerns do these obstacles create from a firm-level perspective?
- What policy options promote a more mutually supporting relationship?

Fulfillment of Strategic Objectives

This project contributes directly to the fulfillment of the objectives under the Trade and Environment pillar of the 2005–2010 Strategic Plan[6] and also supported by the Puebla Declaration, including:

- enhancing North American trade in green products and services, and
- broadening the understanding of trade and environment linkages and thereby promoting policy coherence, both at the domestic and regional levels in North America.

Information for Decision-making

There is now widespread awareness of the co-dependency between the economy and the environment in North America. Critically missing at the decision/policy-making level, however, is solid, empirically-based and non-anecdotal knowledge on the inter-relationships between the key factors of trade, sustainability, competitiveness in a given area of interest, as well as a good understanding of the trade-offs among various policy tools to promote these key factors. This project will inform NAFTA Parties as well as North American business to identify actions that could advance their environmental sustainability agendas while remaining competitive in the rapidly changing global economy.

Capacity Building

States and provinces across North America, also mandate environmental legislation. This can occasionally lead to inconsistent policies from a North American perspective. Hence, there is a need to build capacity and outreach with key state and provincial players in order to fully harness the competitiveness agenda is crucial.

Trade and Environment

This work is aligned with the Trade and Environment Strategic Plan which aims to promote policies and actions that provide mutual benefits for the environment, trade and the economy.

By linking exploration efforts with mechanisms to act upon their findings, the project is also in alignment with the Plan's objectives.[7]

North American Scope of the Project and its Relevance to the Three Parties

Work is anticipated to focus on critical environmental issues[8] which are transboundary and in areas where competitive pressures are most significant, particularly those related to trade. These include areas such as eco-labeling and certification, environmental goods and services, as well as consideration of end-of-life management, automobiles and natural resources scarcity. Sectoral focus will usefully build on CEC experience, and could therefore include: environmental goods and services, automobiles, plastics, chemicals and electronics. Another area to further explore are those sectors which provide environmental services to a wide range of sectors, for example, recycling, water management, remediation services, de-contamination, etc. This is a burgeoning and niche area in North America due to the increase in environmental issues for industry, including the barriers and opportunities to adequately promote end-of-life management industries in the region.

CEC Niche and Value Added

The CEC, as a specialized agency involved in trade, economy and environment has accumulated relevant institutional experience pertinent to these issues and is uniquely positioned to support the development of this activity. At the same time, educational, private and not-for-profit institutions throughout North America are working on issues related to either competitiveness or sustainability or both. As a convener the CEC will seek to involve these organizations in developing a plan of action for competitiveness and sustainability in North America.

[6] Looking into the Future. Strategic Plan of the CEC 2005-2010. http://www.cec.org/files/PDF/PUBLICATIONS/2005-2010-Strategic-plan_en.pdf. See section 5.3. Page 12.
[7] See http://www.cec.org/files/PDF/ECONOMY/Trade-Env-Plan2005_en.pdf

[8] Such as climate, energy, biodiversity, human health and water, as identified in CEC (2008) The North American Mosaic: an overview of key environmental issues.

Current work on sustainability and competitiveness by other organizations, including the World Resources Institute, World Economic Forum, International Institute for Sustainable Development as well as the work of several academic institutions has to date not focused on the specific challenges at the North American level. The work of the Free Trade Commission, aims at developing a work plan to respond to the ever-increasing pressures on North American competitiveness,[9] but the environmental quotient of such work has not been developed. Activities under this project aim to fill part of that gap. Increased market coordination and the need to grapple with economies of scale could render the North American economy increasingly competitive. For example, building capacity for recycling installations would involve concerted efforts between players from all three countries.

Activities and Outputs

Key Activities

- In consultation with TEWG, assemble the Advisory Group and select areas for further work in light of findings from funded research and outputs of JPAC Meeting on Environmental Sustainability and Competitiveness.
- As considered appropriate by the TEWG and in consultation with the Advisory, support the creation of Task Groups to act upon findings; and,
- Develop Action Plans to improve environmental sustainability and North American competitiveness, focusing on a number of sectors or issues.

Target Groups

- North American public and private sector decision-makers, along with ENGOs and academia are the target audiences for this project.
- Federal, states and provincial governments.

Partners, Stakeholders

Industry associations, particularly those for the sectors that will be the focus of attention are key stakeholders. Similarly, leading stakeholders, public or private, identified during the scoping studies in 2008.

Leveraging

The expertise of the members of the Advisory Group, as an in-kind contribution will comprise an important in-kind contribution.

While not secured at this point, it is expected that industry representatives will be able to provide support for the work of the Action Plans.

Outputs and Associated Timelines

By fall 2009: Integrated report on Environmental Sustainability and North American Competitiveness.

Integration of Task Groups to develop Action Plans

Anticipated Outcomes and Performance Indicators

Direct Outcomes:

- Increased understanding of the relationships between environmental sustainability and competitiveness in North America as well an identified set of policy options to inform NAFTA Parties and in support of work under the FTC.
- Action plans for key sectors or issues, to be implemented by industry or other stakeholders. This Action Plans may also inform the development of the 2010-2015 Strategic Plan.

Performance Indicators

- Outputs of the project used by Industry, the NAFTA Parties and the FTC as part of their inputs for deliberation.

Intermediate Outcomes:

- Policies and actions being identified to further promote the uptake of environmental services.

Performance Indicators

- Elements of the report being further developed to assess implementation of policies and/or guidelines that drive environmental performance across key industrial sectors.

Final Outcomes:

- A concerted attempt to decouple economic growth from environmental impacts while enhancing North America's competitiveness.

Performance Indicators

[9] Joint Statement of NAFTA trade ministers, 22 April 2008

- Policies and actions implemented being assessed as positive for the environment and North American competitiveness

Timetable, Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

The Advisory Group is expected to meet during Q1 (2009) to determine key sectors and priority environmental issues to start examining. An interim report is expected by Q4 and a final report by Q2 in 2010.

Target End Date for CEC Involvement

This project is expected to end by 2010. However, the issue of sustainability and competitiveness will remain relevant and therefore 2009 outputs could inform the content of the 2010–2015 Strategic Plan.

Sustainability Beyond

This project is expected to end in 2010. At this time, the CEC aim is to catalyze further action by the Parties and stakeholders. The principle of subsidiarity will terminate the work of the CEC.

Communications

Project design and implementation will be carried out in consultation with relevant agencies and stakeholders (trade associations and environmental services sector, NGOs, etc.) in the sustainability and competitiveness debate. With this approach, it is expected that the project will provide relevant content that will enhance cooperation among Parties.

This project and its outputs will serve to position the CEC and its Council in relation to NAFTA's governing bodies, with respect to a highly relevant topic for North American industry, government, and policy audiences alike.

Information Management

It is expected that the utilization of alternative ways to communicate with a wider audience, such as blogs and webinars will be supported by the exiting information services and architecture maintained by the CEC Secretariat.

Distribution: General
C/OP09/Draft3/PROJ5
ORIGINAL: ENGLISH

Project 5	**Harnessing Market Forces for Sustainability**	**Responsible Project Manager at the CEC Secretariat**	José Carlos Fernández (components A and B) Thomas Hammond (component C)
Planned Allocation	Component A: Supporting the Growth of Green Building: C$90,000 Component B: Supporting the Production and Use of Renewable Energy: C$105,000 Component C: Conserving Biodiversity through Trade: C$105,000 **Total: C$300,000**	**Working Group(s) associated with this work**	Trade and Environment Working Group (TEWG), Biodiversity Conservation Working Group (BCWG)

Objective of Project

To promote policies and actions that will expand the use of market forces as drivers to achieve environmental improvements, with a focus on renewable energy, green building, and biodiversity. This global aim will be furthered in these three component areas by means of the following:

- Promoting policy and actions to enhance the production and use of renewable energy in North America by addressing market barriers and improving regional capacity to enhance the generation, transmission and consumption of renewable energy.
- Accelerating the uptake of green building by examining trade and market barriers to products, technology and financial investment for both new and retrofitted buildings throughout North America.
- Complete analysis of leading green enterprises in North America, particularly those with relevance to biodiversity conservation.
- Assess the potential of market and trade mechanisms to promote conservation and sustainable management of ecosystems and support economic development.

Background

The CEC has a long-standing goal of promoting policies and actions that provide mutual benefits to the environment, trade and the economy. Accordingly, the identification and analysis of opportunities and methods to harness emerging green markets has been a common theme across several CEC projects. Activities under this theme are in part aimed at supporting the Parties in their commitment under NAAEC[1] Article 2.f, which obligates them to promote the use of economic instruments for the efficient achievement of environmental goals.

A commonly cited example of the way in which the CEC has helped to build positive links between environmental goals and trade is the assistance it provided to coffee growers in establishing an international market for shade-grown coffee—whose manner of cultivation conserves critical species habitat—facilitating sustainable development and trade. This commodity-habitat example has also been a reference point for the further exploration of opportunities for CEC market-oriented work in biodiversity.

The work on both renewable energy and green building finds its origin, in part, in two NAAEC Article 13 reports, both of which sought to explore

[1] North American Agreement on Environmental Cooperation, <http://www.cec.org/pubs_info_resources/law_treat_agree/naaec/index.cfm?varlan=english>.

ways to promote greener trade in North America and identify recommendations to address existing market barriers.

In the case of biodiversity and renewable energy, both are explicitly referenced in the Puebla Declaration[2] as well as in the CEC's Strategic Plan, as well as the more specific Strategic Plan on Trade and the Environment.

The themes under this project have had different types of advisory groups to ensure technical quality and the development of synergies with existing projects. It is proposed that each component will have its own advisory group, with the Trade and Environment Working Group (TEWG) providing general oversight.

Rationale

In recent years, *g*reen markets have experienced significant attention and growth and the three market areas covered under this project are no exception. Energy, the built environment, and biodiversity are areas where important environmental values are at stake and where vibrant, emerging green markets are offering potential to drive significant resources towards conservation of natural resources and the environment. The examples of these emerging markets attest to the growing general relevance of the environmental dimension in the marketplace. While there remain issues regarding the feasibility of some market approaches, the focus is shifting to one of promoting the scalability these emerging markets.

In this context, there is a need to refocus the work of the CEC from assessing financial viability and demonstrating market approaches, such as was undertaken in the renewable energy pilot in the mid-1990s or the shade-grown coffee project in the early 2000s, to promoting a broader application of these approaches and the expansion of green markets. This would include work to further enable green building, renewable energy, or habitat conservation in order to benefit from participation in emerging markets, such as the existing voluntary carbon market, in addition to specific work to address outstanding market barriers.

Renewable energy can help provide for current and future North American energy needs, with multiple environmental benefits. However, the full potential of renewable energy to contribute to energy security and displace other less environmentally desirable forms of energy cannot be fully realized without addressing a number of challenges, including the facilitation of transmission access and the overcoming of other informational and transactional barriers.

The use of green building practices, particularly to improve the environmental performance and impact of the existing building stock, can have significant positive effects, such as the conservation of energy, materials, and water, along with lower resource and waste disposal costs. However, despite significant market growth, green building represents a small fraction of the new construction and renovation of buildings in North America, and a number of barriers may prevent greater market access and faster uptake, including high quality harmonized environmental metrics that may facilitate greater access to new financing options.

Similarly, while the economic benefits of the conservation of biodiversity are significant and there is an increasing number of examples of market-based approaches that recognize the value of biodiversity, access to green markets still involves significant transaction costs. Also, there is a need to facilitate for land owners and custodians the use of existing mechanisms that provide effective incentives to preserve habitat integrity.

Activities and Outputs

This project has three operational components, project descriptions of which follow.

A. Supporting the Growth of Green Building

B. Supporting the Production and Use of Renewable Energy

C. Conserving Biodiversity through Trade

[2] <http://www.cec.org/files/PDF/COUNCIL/Puebla-Declaration-2004_en.pdf>.

Distribution: General
C/OP09/Draft3/PROJ5A
ORIGINAL: ENGLISH

Project 5A	**Supporting the Growth of Green Building**	**Responsible Project Manager at the CEC Secretariat**	José Carlos Fernández
Planned Allocation	C$90,000	**Working Group(s) associated with this work**	Trade and Environment Working Group

Objective of Project

To foster green building markets in North America by identifying barriers and opportunities to accelerate the up-take of green building practices, with particular reference to enhancing the financial and environmental metrics for green building performance.

Background

Project History and Foundation

In 2006 the CEC initiated development of an independent (Article 13) report, *Green Building in North America: Opportunities and Challenges.*[1] Published in 2008, this report and nine detailed background papers[2] identified the major challenges and opportunities for green buildings to play a transformational role in addressing a number of environmental challenges, most prominently greenhouse gas emissions and energy conservation.

The report notes "Green building addresses climate change and other energy-related air emissions in two basic ways: first (and most importantly) by reducing the amount of energy used to light, heat, cool and operate buildings and their appliances, and second, by substituting for what is currently mostly carbon-based energy with alternatives that do not involve the production of greenhouse gases and other harmful air emissions."[3]

The report included recommendations to government and industry to make green building standard practice for all new and existing buildings.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

The CEC's 2006–2008 green building work was guided by an international advisory group of prominent developers, architects, sustainability and energy experts, real estate appraisers and brokers, together with local and national government representatives. Development of the background research engaged a large and representative group of stakeholders: national green building councils; local authorities (responsible for building codes) policy; leasing and housing authorities from Canada, Mexico and the United States; energy, construction, valuation, and finance experts; and certification and labeling bodies. Finally, three public workshops in 2007 in the United States and Mexico brought hundreds of additional participants into the development of this report and related work.

Advisory Groups Related to this Project

The Trade and Environment Working Group (TEWG) will provide oversight. It is not proposed that the Article 13 Advisory Group be formally reconstituted or assembled for the purposes of this project. Rather, to

[1] http://www.cec.org/pubs_docs/documents/index.cfm?varlan=english&ID=2242
[2] http://www.cec.org/greenbuilding/index.cfm?activityId=1&varlan=english

[3] Green Building in North America: Opportunities and Challenges, p. 24.

facilitate outreach efforts and to support the highest quality work the CEC will rely upon ad-hoc advisors and experts drawn from the above-described network and other key stakeholders.

Rationale

In Canada, Mexico, and the United States, commercial and residential building operations account for approximately 23, 30, and 40 percent of energy consumption, respectively. Every year, the energy used by buildings in North America results in the release of more than 2,200 megatons of CO_2, approximately 35 percent of the continent's total. Recent studies by the Intergovernmental Panel on Climate Change (IPCC), McKinsey & Company, and Vattenfall, indicate that improved building practices are some of the quickest and cheapest ways to reduce significantly greenhouse gas emissions, often with net economic benefit. Accordingly, growing number of organizations, institutions, and government entities in North America are calling for aggressive energy performance improvements in the building sector. In short, green building represents some of the ripest "low-hanging fruit" for achieving significant and cost effective reductions in greenhouse gas emissions. Moreover, in many circumstances green building combines environmental gains with the opportunity for a positive economic return.[4].

Although many efforts are underway to accelerate the market uptake of green building, this activity is still relatively small and focused primarily upon the development of *new* building stock. Maximizing environmental benefits, however, requires accelerating the up-take of green building practices and to scale up the market—particularly with respect to the vast bulk of the 125 million previously constructed commercial, public and residential buildings in North America. This approach would not only provide significant incremental environmental benefits, beyond greenhouse gas mitigation, but also promote "green jobs" and sustainable economic development.

The Article 13 report identified opportunities for the NAFTA countries to work together to improve the building sector. "The building industry is changing rapidly. Product standards are increasingly international, with ongoing efforts to harmonize performance metrics across national boundaries. Building components designed in the United States may be manufactured in Mexico and assembled on-site in Canada." Potential areas of cooperation include:

- share resources and information,
- promote international trade in environmentally-preferable building products and proven-yet-underutilized technologies,
- support eco-labeling programs,
- pursue joint research opportunities, and
- disseminate research and training information.

The report also suggests that some concrete activities may include, for instance, contributing to harmonize Canadian, Mexican, and US building data via existing lifecycle inventory databases, analyze building material trade flows among the countries, support bioregional mapping efforts for use by standards developers in regionalizing national rating systems, develop life-cycle scenario modeling for building products, explore opportunities for reuse and recycling of construction debris among the countries, and promote technology and knowledge transfer among all three countries.

Although the recommendations in the CEC's Article 13 report are directed to government and industry for implementation, this project proposes three specific activities for which the CEC is uniquely suited: first, an analysis of trade flows and identification of trade-related barriers to the development of a North American green building industry (including raw materials, technologies, end of life industries, and investment flows); second, a focus on the potential of regionalizing standards and rating systems, and facilitating their application to promote a North American industry using a life-cycle perspective; and, finally—to accelerate the uptake of green building—identify opportunities to encourage the development of and access to financing mechanisms that adequately recognize the environmental value of green buildings, particularly in the realm of existing carbon markets. While some such mechanisms already exist, not all green buildings or building sectors are necessarily eligible and active in this market. Existing voluntary carbon markets (i.e., CCX, Montreal Climate Exchange) occupy a unique position to help accelerate the greening of the building sector, and to foster green investment flows in the region. The sale of carbon credits under current

[4] Green Building in North America: Opportunities and Challenges, p. 5

markets may be expected to produce incremental cash flow for public and private green real estate projects, including a possible wide-spread application of green building features to existing stock in the form of energy-saving retrofits and renovation.

Fulfillment of Strategic Objectives

The Commission's 2005–2010 Strategic Plan calls for the promotion of efforts to improve private sector environmental performance as well as through model environmental compliance approaches.[5] The Joint Public Advisory Committee (JPAC), in Advice to Council Resolutions 04-05 and 06-01, has urged the CEC Council to promote aggressively the use of renewable energy to achieve its objectives for environmental protection and improved human health and the well-being of citizens of North America. In more general terms this project supports the following objectives of the 2005–2010 Strategic Plan.

Information for Decision-making

Strengthens the capacity of North American decision-makers to understand continental environmental issues of common concern.

Capacity Building

Improves private sector environmental performance through model environmental compliance approaches

Trade and Environment

Increases the capacity of the three countries to identify and address trade-related environmental concerns to achieve mutual benefits for trade and the environment by promoting a greater market for green building products and services and improve collaboration among the three countries.

North American Scope of the Project and Its Relevance to the Three Parties

The NAFTA Partners have stated their commitment to promote greener trade in the region and to promote the competitiveness of North American industries. Green building will help ensure North American competitiveness in the global market for products, technologies, and practices essential to North America's future.

Outputs from this project would be relevant to all NAFTA partners.

Ultimately the significant environmental benefits that would accrue from a sustained and larger-scale initiative to retrofit and apply green building technology and standards to existing building stock could, as underlined by the IPCC, greatly assist each country and North America as a whole in accomplishing GHG-reduction targets with existing and proven technology and practice.

CEC Niche and Value Added

As a result of the work to produce the Article 13 report identified above, and the development of subject matter capacity and an extensive network of Green Building policy and technical experts the CEC is well positioned to address these issues from a North American perspective, linking national of sub national initiatives that are underway in each of the areas of work under this project description. To ensure non-duplication of efforts, the Secretariat will engage some of the members of the CEC's network of internationally recognized green building experts[6] who played an important part in the Article 13 Green Building report.

Moreover, the project aims to incorporate existing work and create partnerships with relevant actors across North America.

Linkages with other CEC projects

This project is closely linked with the project on renewable energy; first, like renewable energy, this project also seeks to scale the uptake of this industry; second, there is a clear overlap in which promotion of either markets would positively impact the other. It may be possible that the exploration of financing opportunities and prospects within existing voluntary carbon mechanisms could be done in conjunction with that other project.

[5] Ibid., page 11.

[6] Green Building in North America—Opportunities and Challenges, Secretariat Report to Council under Article 13 of the NAAEC, pp. 10-11.

Activities and Outputs

Key Activities

1. Research trade flows and refined identification of trade-related barriers to the development of a North American green building industry (including raw materials, technologies, end of life industries, and investment flows).

2. Analyze the potential of regional standards and rating systems and codes, or facilitating their application, to promote a North American industry, using a life-cycle perspective. This will include, the analysis of the efficiency of different rating systems and environmental metrics to clarify options for harmonization of standards and measurement of environmental benefits (e.g., offsets, energy and resource savings) to facilitate greater participation in the green building market.

3. A study to assess the existing and emerging financial mechanisms available to support the green building market, with a particular focus on opportunities provided by existing carbon financial markets, and that may facilitate greater market access to enable the application of green building technology and approaches to the vast bulk of existing building stock in North America.

The outputs associated with this project are anticipated to be:

- An analysis of trade flows as well as existing barriers and opportunities for greener trade in green building related goods and services in North America;
- A study of the potential benefit and opportunities to develop regional standards, rating systems or codes across North America; and
- A study assessing the financial mechanisms to promote the green building market in North America and identification of ways to scale them up, including models for aggregation of green building environmental benefits.

Target Groups

Green building councils, local authorities (responsible for building codes) and federal governments of the three countries (housing), investment funds (mortgages), certification and labeling bodies (e.g., Green Building Certification Institute).

Partners, Stakeholders

Members of the CEC's ad hoc Green Building advisory network, as well as finance, valuation, development, and energy services experts. Other partners for dissemination could include *Green Building Source* and *Environmental Building News*.

Leveraging

It is expected that members of the Advisory Committee will provide important in-kind contributions to the project through their advice.

Additional resources have not been secured but will be sought during implementation of the project.

Outputs and Associated Timelines

Commissioned studies will be completed by the summer 2009.

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Improved understanding of the trade dimension of green building markets.
- Increased understanding of the role of standards and their harmonization to promote market development, innovation and facilitate trade in this industry.
- Improved understanding of the financial mechanisms that support the green building market, including models for aggregation of environmental benefits.

Performance Indicators

- Trade-related barriers to the development of a North American green building industry are identified.
- Opportunities for the potential of regionalizing standards and rating systems are outlined.
- Opportunities to encourage the development of and access to financing mechanisms for the green building market are identified.

Intermediate Outcomes

- Facilitated access to efficient financial mechanisms in the green building market.

Performance Indicators

- Increased trade in green building products and services, including technology and knowledge transfer.

Final Outcomes

- Green building market in North America is growing rapidly.
- Application of green building technology and practice to existing building stock increases significantly

Performance Indicators

- Increased financial investment in green buildings.
- Increased trade in greener building materials.
- The number of certified Green Buildings is increasing considerably in North America.

Timetable, Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

This project is one follow-up to the Article 13 report that identified opportunities for the NAFTA countries to work together to improve the building sector.

Target End Date for CEC Involvement

No further activities are planned beyond 2009.

Sustainability Beyond

The project expects to build the interest and commitment of various stakeholders to act independently upon the findings. Adoption of policy recommendations is a responsibility of government and regulatory entities at all levels; uptake of market-based elements would be the responsibility of the private sector.

Communications

To the extent possible and in line with outreach practices at the CEC, the 2008 Article 13 report will continue to be disseminated, particularly focusing on stakeholders who are responsible for green buildings, such as provinces, municipalities, building associations, realty associations, as well as housing and mortgage corporations.

The target audiences for communication of this initiative are real estate and development professionals (owners, property managers, building contractors) as well as energy and financial services industries and regulators. The CEC will communicate the implementation and results of this project via specialized trade magazines and journals, possibly including *Green Building Source*, *Environmental Building News*, and professional associations including *Green Building Certification Institute*, as well as municipal/local and provincial/state governments.

Information Management

No database is anticipated to be produced from this activity.

Distribution: General
C/OP09/Draft 3/PROJ5B
ORIGINAL: ENGLISH

Project 5B	**Enhancing the Production and Use of Renewable Energy**	**Responsible Project Manager at the CEC Secretariat**	José Carlos Fernández
Planned Allocation	C$105,000	**Working Group(s) associated with this work**	Renewable Energy Experts Committee

Objective of Project

To promote policies and actions that provide mutual benefits for the environment, trade and the economy, and encourage sustainable consumption, production and trade in North America, by addressing market barriers and improving regional capacity to enhancing the production, transmission and consumption of renewable energy (RE).

Background

Project History and Foundation

Energy was identified as a key area of activity for the CEC as early as 1995 with work focusing on documenting the cost-effectiveness of renewable energy, exploring cooperation opportunities on voluntary approaches for the promotion of energy efficiency, and assessing the potential for a greenhouse gas (GHG) trading system for North America. Since that early work, the CEC has addressed more generally the opportunities to promote energy efficiency, to take advantage of financing opportunities related to the climate policy agenda, and to foster a continental market for renewable energy.

A significant milestone in this regard was the CEC's 2002 Article 13 report, *Environmental Challenges and Opportunities of the Evolving North American Electricity Market*[1], which examined the environmental impacts of a growing, continental electricity market. The report spurred significant follow up activity in areas including renewable energy portfolios, renewable energy certificates and tracking systems. In 2003, the opportunities to link renewable energy, energy efficiency and carbon markets were further explored at the CEC[2].

Other actions to date by the CEC include work to review existing definitions, documenting programs, technologies and policies that could foster RE. It has also compiled best practices and developed several guides, particularly at the community level, for financing and project development. More recently, it has also finalized work on methodologies to evaluate non-air benefits of RE as well as a review of existing literature on the environmental effects of liquid biofuels.

During 2008 the CEC focused its efforts on two areas: completing outstanding research outputs and, exploring the opportunities to finance small-scale renewable energy projects, including through aggregation.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

Stakeholders include: renewable energy project developers, including indigenous and local communities; renewable energy associations, particularly in the wind energy sector; the North American Bird Conservation Initiative; and academic research centers

[1] http://www.cec.org/programs_projects/other_initiatives/electricity/index.cfm?varlan=english

[2] Patterson, Z and CL Carpentier (2003) Background Paper: Market-Based Mechanisms for Carbon Sequestration, Energy Efficiency and Renewable Energy in North America—What Are the Options? http://www.cec.org/files/PDF/ECONOMY/Market-Based-Paper_en.pdf

Advisory Groups Related to this Project

In 2005 the Parties appointed a Renewable Energy Experts Committee (REEC) to guide and ensure the technical robustness of work in this area.

Rationale

By supporting the increased production and trade in RE across North America, the project responds to the objectives of the NAAEC to promote sustainable development, and to support the environmental goals and objectives of NAFTA. Moreover, RE has multiple environmental benefits, including reduced air pollutants and greenhouse gas emissions. Renewable energy can help address the key challenges of sustainable development, promote energy diversification and security and, most notably, foster economic development while reducing the environmental impact of the production and consumption of fossil-fuel based energy. These activities are also a direct response to the goals of the CEC's 2005–2010 Strategic Plan. Moreover, at the 2008 North American Leaders Summit, the three NAFTA leaders noted that: "Building on the gains in technology over the last five years, we are exchanging information and exploring opportunities for joint collaboration to further reduce barriers to expanding clean energy technologies."

The Joint Public Advisory Committee (JPAC), in Advice to Council 04-05 and 06-01, urged the Council to promote aggressively the use of renewable energy to achieve environmental protection and improved health and well-being for the citizens of North America.

This project proposes to *close the loop* on existing tasks, and complete work intended under the current Strategic Plan in a manner that may also inform the development of the CEC's 2010–2015 Strategic Plan.

Related to the promotion of the renewable energy markets and in view of the active voluntary carbon market as well as the evolving national and international mechanisms, it is proposed that the CEC undertake a *Scoping Analysis* on the opportunities and challenges to promote the development of North American renewable energy markets through carbon financial instruments. This activity would be aimed at improving our understanding of the ways in which the renewable energy markets interact with existing and developing carbon markets, including in regard to issues such as the minimum requirements for the recognition of offsets and carbon certificates across borders and regimes. This work will include the views of government, industry and nongovernmental organizations. Its outputs will inform various stakeholders, including the private sector, on ways to foster and participate in existing and emerging market opportunities. This task will build upon existing and on-going work by various organizations.

To assist the Parties in addressing environmental concerns of RE that may hinder the expansion of RE in North America, the CEC proposes to identify areas and corridors where harnessing wind power may threaten migratory and resident avian and bat populations. The study will build on the data and mapping tools available in North America regarding wind energy potential and avian flyways, including work already undertaken by other agencies such as the American Wind Energy Association. These tasks will be completed in collaboration with CEC's geospartial mapping and biodiversity conservation staff and resources and the North American Bird Conservation Initiative (NABCI) will be approached as a partner.

In terms of achieving the intended goals of the Strategic Plan, work to date has been substantive and this project aims to ensure adequate dissemination of the outputs to date, particularly at the community level, the target of a number of outputs. This project proposes to disseminate work outputs, relying on local partners to the greatest extent possible, particularly to reach local and indigenous communities, for whom a number of outputs are designed. In addition, the work on evaluation of benefits from renewable energy will also be one of the key products to disseminate.

Fulfillment of Strategic Objectives

The CEC's 2005–2010 Strategic Plan, called for the promotion of the renewable energy market.[3]

Information for Decision-making

This project will provide input for renewable energy policy makers.

Capacity-Building

This project will provide input for organizations interested in developing renewable energy projects, particularly indigenous communities, potential providers of RE across borders as well as indigenous and local communities in areas with RE deployment potential.

[3] Looking in to the Future, CEC Strategic Plan 2005-2010. http://www.cec.org/files/PDF/PUBLICATIONS/2005-2010-Strategic-plan_en.pdf. Page 13

Trade and Environment

The Strategic Plan on Trade and Environment identified actions to address informational and transactional barriers that add to the cost of renewable energy. Actions included documenting and sharing best practices on developing a renewable energy market, enhancing the use of available information about renewable energy resources, investigating policies aimed at leveling the playing field related to transmission access, providing guidance for calculating the environmental benefits of renewables, promoting purchases of renewable energy, and promoting a North American market for renewable energy certificates. Activities within this project will address some of these objectives.

North American Scope of the Project and Its Relevance to the Three Parties

The Parties have charged the CEC to address the development of renewable energy markets and related environmental issues from the North American perspective. Accordingly, the CEC has accumulated relevant expertise and established networks at the regional scale that makes this an appropriate forum to continue this work as described for 2009.

This is relevant to the three Parties, and supports stated goals to promote policies and actions that provide mutual benefits for the environment, trade and the economy—in particular, to enhance North American trade in green products and services and remove trade barriers, utilizing market-based approaches.

In particular, recent changes in Mexican legislation, which call for further promotion of renewable energy, will open new opportunities and relevance for the CEC work in this area.

CEC Niche and Value Added

The CEC's history of work on makets for environmental goods and services, North American carbon markets as well as barriers and opportunities for North American renewable energy markets make it a suitable agency to explore the current market opportunities under task 1.

The CEC is also well positioned to undertake the study on avian and bat risks from wind energy study, in particular, given the past work under the biodiversity program, which has already created maps for migratory birds and important bird areas as part of the North American Bird Conservation Initiative (NABCI).

Linkages with Other CEC Projects

Enhancing the deployment of environmentally preferable technologies and practices is also a stated goal of the proposed project on green buildings. In both cases, the barriers and opportunities for adequate financing, including those within the existing voluntary carbon markets, are analyzed.

The project also links with the North American Atlas with regards to the potential to both develop and use new geospatial data layers in support of the avian and wind energy component.

Activities and Outputs

Key activities

- Undertake a scoping analysis on the opportunities and challenges to promote development of North American RE capacity through carbon financial instruments;
- Support a scoping study to identify areas and corridors where harnessing wind power may threaten migratory and resident avian and bat populations, and convene a meeting of experts in fall 2009, which will also serve as a meeting of the REEC; and
- Disseminate key outputs of the project to target audiences, particularly local and indigenous communities as well as the guides to valuate the benefits from renewable energy.

Partners, Stakeholders

Stakeholders include: renewable energy project developers, including indigenous and local communities; renewable energy associations, particularly in the wind energy sector; the North American Bird Conservation Initiative; and academic research centers. To facilitate outreach efforts, the CEC will rely on the Parties and various partners to identify the government agencies and other stakeholders best positioned to assist in these efforts, in particular, the recently created American Wind Wildlife Institute (AWWI) will be approached.

Leveraging

Significant and valuable in-kind support is continuously provided by REEC members. New leveraging opportunities for the avian/bat mortality task will be examined with both the NABCI and academic research centers.

Outputs and Associated Timelines

The outputs associated with this project are anticipated to be:

- A background paper reviewing the opportunities and challenges to promote Renewable Energy through carbon financial instruments;
- Scoping study to identify areas and corridors where harnessing wind power might threaten migratory and resident avian and bat populations, validated through a trinational meeting on experts; and,
- Dissemination of CEC outputs regarding RE to targeted audiences.

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Better understanding of how development of renewable energy can be promoted through carbon markets, which will serve as valuable information tools to guide methodology and project selection criteria for renewable energy projects in carbon markets.
- Increased knowledge on the wind power corridors that could pose a threat for migratory and resident birds and bats, as well as potential mitigation policy and practice.
- Better informed communities on how to develop RE projects.

Performance indicators

- Downloads of CEC materials on RE issues above and/or number of references to CEC work by the intended audiences.
- Number of communities having access to the RE guides.

Intermediate Outcomes

- Increased use of existing carbon financial instruments for the promotion of RE.
- Improved assessment of the potential risk of wind farms to avian and bat populations.
- Increased use of the CEC outputs as a guide in support of small-scale projects.

Performance Indicators

- Increased number of projects being designed and implemented.
- Increases in trained personnel in North America (data may be available in aggregated form, possibly difficult to tease out contribution of this project).

Final Outcomes

- Identified opportunities to promote Renewable Energy through existing and emerging carbon markets at the North American scale.
- Faster and better assessment of the risk of wind farms to avian and bat populations, with an attendant reduction in preventable mortalities.
- Increased number of projects being implemented by or in partnership with local and indigenous communities.

Performance Indicators

- Increased RE projects, funding and capacity, including those formulated by or in partnership with indigenous and local communities.

Timetable, Project Completion and Sustainability Beyond

The activities planned for 2009 will allow the project to have achieved progress on all areas included in the Strategic Plan objectives and no further activity would be expected in this project beyond 2009.

Communications

The anticipated outputs in 2009 will be of interest to the Parties, organizations interested in purchasing renewable energy (particularly in Mexico), educators, renewable energy developers, and community leaders interested in renewable energy development; including indigenous communities.

The cooperation strategy on education and training will be primarily of interest to academia and governments. Strategic outreach efforts and the development of a dissemination strategy will ensure that all associated organisations are informed of our efforts.

Information Management

Following on the REEC advice, a dissemination strategy for key outputs will be developed. IT support would be provided in-house.

Distribution: General
C/OP09/Draft3/PROJ5C
ORIGINAL: ENGLISH

Project 5C	**Conserving Biodiversity Through Trade**	**Responsible Project Manager at the CEC Secretariat**	Thomas Hammond
Planned Allocation	2009: C$95,000 Completion of 2008 Outputs: C$10,000 Total: C$105,000	**Working Group(s) associated with this work**	Trade and Environment Working Group, Biodiversity Conservation Working Group

Objectives of Project

This project supports the conservation and sustainable use of biodiversity by building on past achievements of the CEC program to:

- Identify opportunities to leverage markets and trade mechanisms to promote conservation and sustainable management of ecosystems and support economic development; and,
- Complement and improve the analysis of leading green enterprises in North America and the "how-to" guide (tool-kit).
- Identify proposals that could form the basis of projects for the 2010 operational plan

Background

Project History and Foundation

The CEC was an early proponent of exploring the potential environmental and social benefits from market-based approaches to conservation. Such work includes the successful shade grown coffee initiative beginning in 1999, and scoping emerging carbon markets in Mexico in 2001[1]. More recently, in 2006, a comparable project screened various products that could foster markets promoting species and habitat conservation. Finally, the development of the "how-to" guide for sustainable businesses was delayed due to the inability of the project partner (the International Institute for Sustainable Development—IISD) to secure counterpart funding – an issue resolved in the fourth quarter of 2008[2].

Proposed activities in 2009 build on the work outlined above. In particular, the project is designed to address new & emerging trends in the area of ecological goods and services. This project will provide information to decision-makers (CEC Parties) on opportunities to use trade mechanisms to support conservation of biodiversity.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

Previous examination of the potential for market-based instruments to promote conservation has occurred with the participation of both the Biodiversity Conservation and the 10(6) Working Groups. Stakeholders associated with this initiative at present include The International Institute for Sustainable Development (IISD), Forest Trends and the Katoomba Group, the *Instituto Nacional de Ecologia* (INE), and the Gund Institute for Ecological Economics at the University of Vermont. Additional leveraged funding for 2009 from IISD has been secured through the SEED Initiative (US$40,000).

[1] Measuring Consumer Interest in Shade Grown Coffee
Mexico and Emerging Carbon Markets

[2] Every effort will be made to complete as much of the planned 2008 activities as possible during the reminder of 2008. However, due to this delay some carry forward into 2009 is expected to complete work already underway.

The above stakeholders represent the leading edge of a small but growing community of institutions working to better understand and tap into market potential as a means to support sustainable use of ecological resources. These institutions are active both nationally and internationally, and can best complement the emerging work of North American governments in this area.

Advisory Groups Related to this Project

The principal advisory group for this project is the Trade and Environment Working Group, with participation of the Biodiversity Conservation Working Group.

Rationale

Ecosystems and the natural environment represent an important contribution to the "infrastructure" of healthy economies. At present society derives a wide range of ecological services and products, such as erosion or flood control, waste and nutrient cycling, fish harvested from wild populations, and many others – while at the same time paying very little for these services. An analogy would be spending only a small fraction of the billions currently spent on an annual basis to maintain the road network – considered essential infrastructure for healthy economies.

Conservation approaches which utilize or adapt market forces are emerging in all three countries in North America, offering an ideal opportunity to harmonize these markets where possible and to learn from these experiences. Habitat "banking" and biodiversity offsets are now well established tools in the United States, as are broader ecosystem service models such as the Catskill watershed management scheme in upstate New York which provides payments to local landowners to modify their land-use practices. The Chicago Carbon Exchange (CCX) now has over five years of experience in providing a viable, voluntary marketplace for North American companies wishing to take tangible action to reduce the CO_2 impacts from their operations, and this voluntary market recently expanded to include the Montreal Climate Exchange. In Mexico, the national forest agency Conafor has developed mechanisms of payments to forest landholders for ecosystem services[3] as a means to stimulate conservation of forest lands—while at the same time improving watershed management and biodiversity benefits.

At present, many successful models for green products and markets for ecological services are local in scope. However, as demonstrated by the success of a number of well known products or standards, such as shade grown coffee or certified timber products or seafood, growth and market success may be facilitated through supra-national approaches to market standardization.

This project is designed to scope out these challenges and develop concrete strategies for regularizing markets for "green products" and ecosystem services that can take advantage of shared approaches within all three countries in North America. This project also speaks to the core objectives of The North American Agreement on Environmental Cooperation (NAAEC) – that is to create and foster environmental conservation within North America, while at the same time facilitating the development of "mutually supportive environmental and economic policies" throughout the region. Moreover, the project specifically addresses one of three key priorities for action of the CEC's 2005-2010 Strategic Plan, that of identifying successful strategies for balancing trade and economic growth with environmental conservation efforts.

Finally, it is opportune with the initiation of a new strategic planning cycle for the CEC to more closely examine the potential for market-based opportunities which capture benefits for economic growth and environmental conservation, to inform future efforts within the trade and environment program. Through the completion of the activities and tasks outlined below, this project will build on the success of past and recent efforts in this area, and explore potential new trade or market-based approaches to support mutual economic and environmental benefits at a continental scale.

Fulfillment of Strategic Objectives

[3] For the purposes of this study we consider ecosystem-based goods and services as the following:

- Direct goods such as timber (and non-timber products), food, fuel, bio-products (e.g. bio-prospecting & genetic resources), etc.;
- Physical service functions such as carbon storage, nutrient cycling, water cycling, and air purification;
- Biological service functions such as habitats for other species, pollination, biodiversity;
- Social & Cultural values such as recreation.

This project contributes to accomplishment of the CEC's 2005–2010 strategic objectives by representing an important vehicle for the implementation of Objective 9—*Enhancing North American trade in green products and services*. Completion of tasks 1 through 3 will addresses the issue of emerging markets for environmental or ecosystem-based "services" in North America, while task 4 completes the work initiated in 2008 addressing the need to improve markets for green products expressed in the CEC's Strategy.

The outputs and activities outlined here mark the culmination of work related to the "Conserving Biodiversity through Trade" component of the "Harnessing Market Forces" project under the current strategy of the Trade and Environment initiative, as well as under the CEC's 2005–2010 Strategy. Delivery of this project in 2009 is expected to support greater integration of the CEC's trade and environment and conservation activities.

North American Scope of the Project and its Relevance to the Three Parties

It is increasingly recognized that business or market forces can complement ecosystem and biodiversity conservation efforts, along with the notion that environmental and social benefits can be explicitly embedded in market transactions. Recognizing this, the G-8 Environment Ministers in 2007 commissioned a study on The Economics of Ecosystems and Biodiversity, the interim report for which was tabled in May 2008.

In many respects, optimal regulatory conditions to facilitate growth and a level "playing field" for these emerging markets often do not exist in North America. This is not conducive to long term sustainability in this sector, nor does it contribute to improving regional competitiveness. While markets for green products and ecosystem services are expected to maintain strong growth trends, despite global market volatility, North American entrepreneurs are not as well positioned to take advantage of these emerging markets as in other parts of the world.

Improved understanding of favorable and harmonized regulatory environments or emerging markets that could support the growth of the biodiversity sector within a "green economy" in North America will help to propel the development of this market. In addition, improved knowledge of new methods and approaches will assist in improving the competitive position of North American entrepreneurs in this rapidly growing sector of the economy. While there is a growing number of initiatives in North America (as noted above) which adopt/use market forces to support conservation efforts, most are isolated or tend to be comparatively local in scope.

CEC Niche and Value Added

The CEC's catalytic role and value added in this work is founded upon the understanding that the most successful market-based approaches to date which support conservation goals are those which are easily replicable across a variety of national contexts. Given its tri-national scope, the CEC is uniquely placed to assess the growing body of experience of biodiversity-related business ventures from the point of view of extracting lessons and increasing efficiencies (i.e. reducing transaction costs), and exploring applications in this rapidly growing sector of importance throughout North America. Moreover, the CEC has led ground breaking work in North America in the development and marketing of biodiversity-friendly agricultural products, and is thus well placed to leverage this experience in assisting the ongoing growth of this sector.

Linkages with Other CEC Projects

Work envisioned here will assist in providing a coherent framework for the application of market-based approaches within specific tasks proposed under a number of 2009 projects. Examples of such sustainable biodiversity business initiatives include: exploring sustainable economic opportunities for vaquita-friendly fisheries (Recovering the Vaquita and Promoting Sustainable Local Livelihoods), community-based livelihoods initiatives which support conservation of the monarch over-wintering sites (Conserving the Monarch Butterfly and Promoting Sustainable Livelihoods), and examining the economic impacts of invasive alien species. Inclusion of these examples in the analysis will be consistent with recommendations from BCWG.

Activities and Outputs

The key activities/tasks that will be undertaken are as follows:

- Workshop undertaken between T&EWG and BCWG members, including key sectoral experts, to consider the most appropriate use of markets, trade, and economic instruments in the conservation of biodiversity in North America;

- Creation of a steering committee to oversee the implementation of the project, commissioned by the T&EWG and BCWG;
- Scoping study undertaken, based directions from the workshop above and led by the steering committee, to identify opportunities and potential projects for leveraging market forces and trade mechanisms—including trade in green products and markets for ecological services and the identification of possible tariff and non-tariff trade barriers which may exist;
- Follow-up workshop undertaken between T&EWG and BCWG members, including key sectoral experts, to consider the results of the scoping study regarding the use of market forces and trade mechanisms in biodiversity conservation initiatives;
- "How-to" guide/toolkit of green products and services (currently being implemented under the 2008 Operational Plan) further enhanced, ensuring coherence, sustainability, and completion of this activity.

Target Groups

The primary target groups for tasks 1 through 3 of this project are the Parties, along with the members of the Trade and Environment Working Group and Biodiversity Conservation Working Group. The primary target group for task 4 of this project are the Parties, BCWG and T&EWG, along with entrepreneurs, NGOs (e.g., Forest Trends, New Ventures-Mexico), academia (e.g., Gund Institute of Environmental Economics of the University of Vermont), and other interested stakeholders working in the area of emerging markets for green products and services.

Partners, Stakeholders

Stakeholders in this work at present include the International Institute for Sustainable Development (IISD), the SEED Initiative, Forest Trends and the Katoomba Group, and the Gund Institute for Ecological Economics at the University of Vermont, and the *Instituto Nacional de Ecologia* (INE).

Leveraging

Leverage funding of US$40,000from IISD through the SEED Initiative has been negotiated and will be available for the completion of the "how-to" guide and toolkit in 2009.

Outputs and Associated Timelines

Outputs for each task and timelines for completion are outlined in the table below.

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Consensus among T&EWG and BCWG Members regarding the most viable approach to effectively incorporate market forces and trade mechanisms in biodiversity conservation activities;
- Recommendations for potential projects for the CEC, including the Biodiversity and Trade & Environment programs, with respect to utilizing these approaches as a platform;
- Scoping study regarding North-America wide analysis of successful market-based approaches to management of specific ecosystem services or goods, including identification of opportunities to leverage markets and trade mechanisms to support biodiversity conservation;

Performance Indicators

- Evaluation from the workshop exercises;
- Completion of the scoping paper—noting findings from the scoping study of analysis and assessment of current experience;

Intermediate Outcomes

- Improved understanding of the most likely market-based approaches for ecosystem-management (including ecosystem services, specific goods, and other models) that incorporate both biodiversity conservation and economic objectives applicable in the North American context;
- A clear indication of potential market-based activities (products or services) that demonstrate significant potential for wide-spread uptake and success in the North American context;

Performance Indicators

- Assessment of the quality of the analysis and applicability of recommendations to the North American context within the scoping report;

- Measures of unique website "hits" for the how-to guide.

Final Outcomes

- New methods, approaches and activities that support biodiversity conservation through trade
- Improved competitive position of North American entrepreneurs in the green product and services sector

Performance Indicator

- Uptake in recommendations and other outcomes from this project in the evolution of markets for green products and ecosystem services in North America.

Timetable, Project Completion, and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

This project will contribute to improving our understanding of how basic environmental and economic processes are important in providing fundamental services and infrastructure for North American economies, and the ways in which market forces and trade can be employed to more fully reflect the importance of ecosystem services in market transactions.

The culminating steps are: 1) elaboration and completion of the "how-to" guide/tool kit initiated in 2008, and; 2) completion of the BCWG and TEWG review and assessment, and any recommendations concerning on-going CEC work.

Target End Date for CEC Involvement

The 2009 tasks and activities outlined here mark the culmination of work related to the "Conserving Biodiversity through Trade" component of the "Harnessing Market Forces" Project under the current strategy of the Trade and Environment Program, as well as under the overall CEC Strategy.

As noted above, however, markets for green products and ecosystem services are expanding in North America. The results of this effort may inform future work of the CEC in support of market-based ecosystem service/conservation action. It is also understood that this approach will facilitate greater program integration in the accomplishment of trade and environment and biodiversity objectives.

Communications

The target audience for the outputs related to tasks 1 through 3 is the Parties. The audience for task 4 is entrepreneurs in small to medium-size enterprises.

Information Management

The intent of tasks 1 through 3 of this project is to inform the Parties and guide future planning with respect to the CEC Harnessing Market Forces for Sustainability project (Trade and Environment initiative). This work may also inform the CEC Strategic Planning Process for 2010–2015. In this respect, the results of the scoping study will remain an internal working document.

The "how-to" guide/tool kit (task 4) will be published as a website and on-line resource, with a prototype website on a development server available in early 2009. The website content will include supporting information on new markets from green products and services, business practices, and tools to support entrepreneurs in the development of sustainable enterprises.

Distribution: General
C/OP09/Draft3/PROJ6A
ORIGINAL: ENGLISH

Project 6A	**Trade, Transportation and the Environment**	**Responsible Project Manager at the CEC Secretariat**	José Carlos Fernández
Planned Allocation	C$100,000	**Working Group(s) associated with this work**	Trade and Environment Working Group

Objective of Project

To develop a framework to assess the environmental performance of trade corridors in North America from a regional and multimodal perspective. The framework will identify drivers of and barriers to environmental improvement, including in energy use and GHG emissions. This project will also produce a *road map* to assist public and private efforts to green trade corridors in North America.

Background

Project History and Foundation

This is a new project that will build upon previous work. It is founded upon an interest in close collaboration with the private sector and regional associations to foster both trade and environment benefits.

Past work by the CEC in trade-transportation-environment linkages began in 2000 with the publication of a report entitled "North American Trade and Transportation Corridors: Environmental Impacts and Mitigation Strategies,"[1] which focused on five binational segments. The report confirmed that increases in cross-border NAFTA-related trade contributed the bulk of increases in trade-related emissions. It estimated that under a baseline scenario to 2020, CO_2 emissions could increase between 2.4–4 times. It also identified that these impacts are largely affected by the modal balance. The set of recommendations advocated changing fleet technology and fuel choice, reducing delays in borders and increasing efficiency.

More recently, a report by the US Department of Transportation projected that trade will increase almost twofold by 2035.[2] The report focused on quantifying air impacts, and hence did not address the complexity of the multiple relevant environmental linkages such as invasive species, energy, water resources and hazardous materials.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

A large range of private interests are associated with commercial transportation across North America. Stakeholders represent regional (national, binational and international), modal, and sectoral interests.

At the regulatory and public policy level the issues associated with trade corridors and environment involve multiple government agencies and stakeholders, most notably transportation departments, but also including local, regional and national land planning and urban development agencies, environmental management and enforcement agencies and customs management and inspectors, among others.

For the purposes of this project, the burgeoning trade corridors associations are important stakeholders with diverse activities and members, both private

[1] See report at http://www.cec.org/pubs_docs/documents/index.cfm?ID=74&varlan=english

[2] http://ops.fhwa.dot.gov/docs/fafplandraft/fafplandraft.htm; Note as well the DoT Freight Analysis Framework http://ops.fhwa.dot.gov/docs/fafplandraft/fafplandraft.htm .

and public, at regional and continental levels.[3] The agendas of trade-related transportation corridors include issues related to logistics, regulation, border procedures as well as infrastructure.

Advisory Groups Related to this Project

The Trade and Environment Working Group will be the formal working group providing oversight for the project. As a new initiative, a new consultative/advisory group is proposed to support this work.

Rationale

The increase in trade activity is one of the most direct impacts of trade liberalization and economic integration in North America. Transportation, by its nature, is a sector where the link between trade and environmental impacts is most direct.

Trade between Canada, the United States and Mexico has grown rapidly since the implementation of NAFTA. Efficient trade corridors can fuel economic growth and boost North America's competitiveness in global markets. Projections indicate trade activity will increase significantly in the coming years, with a concomitant impact on the environment and infrastructure, including, prominently, at national borders, a hotspot of attention and activity in addressing environment-trade issues.

The growth of trade among Canada-Mexico and the US has contributed to the development of regional economies around and along main transportation corridors. Accordingly, environmental and energy dimensions of this development have grown in importance. This is evidenced by the growing focus on sustainable transportation at the level of trade corridor associations.[4]

While such corridor-focused activity may portend certain improvements in elements of the transportation and trade systems, the achievement of more fulsome environmental benefits can only be attained from a regional-multimodal analysis that provides elements for the development of smart and integrated strategies to green transportation across North America.

This project proposes to develop a framework to assess the environmental performance in transportation corridors and to identify areas of opportunity as part of a regional plan of action. The framework will look at a range of environmental impacts including air and greenhouse gases emissions, energy, land use, noise, habitat and biodiversity loss. The framework will also consider intermodality (rail/sea, short sea/road). Multimodal analysis has already been a focus of environmental attention.[5] Consideration of energy issues and transportation-related greenhouse gas emissions is also consistent with regional initiatives.[6] Under carbon-constrained conditions, it is pertinent to evaluate modes of transportation (rail vs. marine vs. air vs. truck) in terms of its environmental impact versus cost to ship goods/delivery times/existing infrastructures.

In order to test the framework in a simplified environment, the project will focus on a specific trade corridor that will be selected based on a set of criteria.

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[3] Trade corridor organizations followed on the footsteps of NAFTA, typically organized by businesses and metropolitan and state government agencies. The most important of these include:
CASCADIA http://www.cascadiaproject.org/;CANAMEX http://www.canamex.org/index.asp; Plains-to-Plains http://www.portstoplains.com/; La Entrada al Pacifico (LEAP) http://www.la-entrada-al-pacifico.com/ ; NASCO http://www.nascocorridor.com/ ; Border Trade Alliance http://thebta.org/ ;;Gulf of Mexico States Accord http://www.gomsa.org/ ;Quebec/New-York Corridor http://www.corridors.ca/index_en.html;;CANAM-BTA http://www.canambta.org/

[4] In 2008, at the fourth annual symposium on Trade and the Environment in Phoenix Arizona, a workshop on Greening the Trade Corridors brought together more than 200 participants representing trade groups, port authorities, think tanks, universities, transportation corridors, government agencies and private companies. http://nacts.asu.edu/events/symposium-trade-and-environment. The Quebec/New York Trade Corridor (members includes the DOTs, rail, trucking, port, chambers of commerce, etc.) has a plan to reduce the "cross-border regional carbon footprint." To that end, the Quebec/New York Corridors organized the fourth Economic Summit between Quebec and New York State (17th of November 2008 in Montreal) under the Greening the Corridor banner. http://www.corridors.ca/index_en.html. The North American SuperCorridor Coalition (NASCO-starts in Manitoba to Nuevo León and is based in Texas) has adopted a Greening the NASCO Corridor activities include a partnership to promote the EPA's Blue Skyways Collaborative (focusing on improving air quality on the transportation infrastructures of their corridor). http://www.nascocorridor.com/commondetail.asp?id=2171

[5] An example of this is a recent report on the potential of coastal shipping as an alternative http://www.igms.org/docs/americas_deep_blue_highway_IGMS_report_sept_2008.pdf .

[6] Including GHG reductions in trade and freight movement is in line with the action plan on Transport and Air Quality (climate change) that the governors of New England and the premiers of Eastern Canada adopted on 16 September 2008.

Fulfillment of Strategic Objectives

Information for Decision-making

The framework will provide policy options for all levels of government (national, state, provincial and local). The framework will also be used by commercial interests and stakeholders (ex: shippers) to improve competitiveness and energy efficiency, as well as inform investment decisions and operational practices.

Capacity Building

N/A

Trade and Environment

This project supports the CEC's mandate to increase the capacity of the three countries to identify and address trade-related environmental concerns and achieve mutual benefits for trade and the environment. It also works to facilitate trade and expedite trans boundary shipment of merchandise while enhancing environmental compliance and enforcement. The practical focus upon a major trade corridor will serve to inform the CEC's ongoing environmental assessment of NAFTA.

North American Scope of the Project and Its Relevance to the Three Parties

This project will focus on North American Trade Corridors that run from Canada into the United States and down to Mexico. This framework will be relevant for the members of the trade associations from the three countries and for the three governments.

CEC Niche and Value Added

While there are many individual organizations (private and public) that are currently working on different aspects of the environmental dimension of trade corridors there is, at this time, no integrated approach, nor synergy among these groups. For example, the work done by the West Coast Corridor Coalition on the *Intelligent Transportation Systems* has yet to be shared with other trade corridor associations. Given its mandate and institutional expertise, the CEC is uniquely positioned to bring together these various efforts in the development of the Framework. The degree of economic integration as well as the common environmental issues surrounding trade corridors provides a truly tri-national activity as opposed to bilateral.

Trade corridors involve multiple actions by a multiplicity of stakeholders along supply chains. The impact of individual decisions, e.g. expand existing infrastructure or improve freight logistics, may reflect across borders, regions and transportation modes, making it increasingly complex to both assess the environmental footprint but also progress towards reducing it. In other words, what may seem as an efficiency improvement in one area may result in increased pressures in another, creating a need to develop a common approach that informs the analysis of individual private and public actions from a systemic, environmental perspective.

Assessing multiple impacts under one single framework requires sound methodologies and approaches. At the CEC, relevant experience has been gained through the work of the Biodiversity Program, which developed such a framework and developed environmental *scorecards* for marine protected areas, which allow integration of the best knowledge and approaches available in each country to develop *ball park*-level assessments that are comparable across the three countries and incorporating multiple environmental attributes, as well as the role of pressures and policy responses. This methodology will provide a robust departure point for addressing the environmental dimension of trade corridors.

Linkages with other CEC projects

During the implementation of the project in 2009, synergies will be developed with the CEC's trade and environment program (including the environmental assessment of NAFTA) as well as trade and enforcement project work (including compliance workshops).

Activities and Outputs

The key activities and tasks in 2009 are:

Task 1. Develop a framework to assist the selected trade corridor for the environmental performance in transportation including a consultation process with key stakeholders. The framework will also explore options for intermodality (rail/sea, short sea/road) in order to reduce GHG emissions from freight transport.

Task 2. Support the work of the Advisory Group.

Partners, Stakeholders

To develop this project, it is important to secure adequate advice and collaboration from a set of key public and private sector representatives. Therefore, the project proposes to integrate an Advisory Committee to assist the CEC in the delivery of the project. It is proposed that the group would involve 20 representatives: nine from government, (environment and transportation from Canada, Mexico and the United States[7]), three from North American trade corridors three from rail, port and trucking industries, and three transportation specialists (academic, NGOs).

Leveraging

It should be noted that the project will take advantage of trade corridor meetings [e.g., annual meeting of the North American SuperCorridor Organization (NASCO) in Quebec City in June 2009], as well as an associated meeting of trade corridors as part of the concomitant Leaders' Conference (state/provincial elected officials from the three countries). It is expected that this event would also provide an opportunity to host a second meeting of the project's Advisory Committee. The CEC will explore financial or in-kind contribution of the corporate members of the North American trade corridors.

Outputs and associated timelines

By the end of 2009 the basic analytical framework assessing environmental impacts of the Trade Corridors in North America will be developed, with the refined identification of opportunities and the *roadmap* to be completed in 2010.

[7] Including some members of the Transport and Air Quality Steering Committee of the NEG/ECP in order to increase information exchange between the work done within the Conference of governors of New England and Eastern Canadian premiers and the CEC.

Anticipated Outcomes and Performance Indicators

Direct Outcomes:

- Improved common understanding and awareness among trade corridor stakeholders of their environmental performance from a systemic perspective, allowing them to better take action to improve it;
- Facilitate the dialogue and sharing of information between environment, transport and customs officials in order to facilitate the assessment regarding the environmental challenges posed by increased cross-border trade and transportation related infrastructural developments.
- Provide policy options for all level governments.

Intermediate Outcomes:

- Implementation of the framework to assist the Trade and Transportation Corridors in defining their goals, objectives and outputs related to the Greening the North American Corridors strategy;
- Expedite environmentally sound shipments of merchandise across North American border while assuring environmental governance.

Final Outcomes:

- Reduced environmental impacts in the trade corridors.

Performance Indicators

- The framework methodology is used by trade corridor associations.
- Number of environmentally sound shipments.
- Number of environmental impact assessments done in trade corridors.

Timetable, Project Completion and Sustainability Beyond

Culminating steps in Achievement of Program Objectives

The activities for this project will be completed in 2009. The CEC might consider at a later stage to pursue the work in its 2010 Operational Plan to reach out and implement the framework with other trade corridor Associations and their members.

Target end date for CEC Involvement

End of 2009.

Sustainability Beyond

Governments from all-levels (national, state, provincial, local) could support the implementation of the framework developed in this pilot project which should be applicable to other Trade Corridors in North America.

Communications

The project will maintain close collaboration and communication with stakeholders involved in trade corridors. In particular, it will develop a process to consult its partners with a view to increase the value, relevance and practicality of the Framework.

Information Management

Data needs and availability will be one of the implicit tasks within the project. It is assumed this work can be accomplished without changes to the CEC's information management capacity and architecture.

Distribution: General
C/OP09/Draft3/PROJ6B
ORIGINAL: ENGLISH

Project 6B	**Greening the North American Auto Industry**	**Responsible Project Manager at the CEC Secretariat**	José Carlos Fernández
Planned Allocation	2009: C$85,000 Completion of 2008 Outputs: C$5,000 Total: C$90,000	**Working Group(s) associated with this work**	Trade and Environment Working Group

Objective of Project

To support the creation of a North American Suppliers' Partnership for the Environment in the auto industry to promote policies and actions that provide mutual benefits for the environment, trade and the economy and encourage sustainable consumption, production and trade.

Background

Project History and Foundation

The promotion of pollution prevention policies and practices is a key objective of the NAAEC (Article 1(j)). The Commission has over the years documented the status of pollution prevention activity in North America[1] and provided a forum in which the three governments could share their experience, practice, and success in the use of environmental management systems.[2] CEC research has expanded the understanding of effective mechanisms to promote the improvement of environmental performance and compliance of the private sector, particularly in small and medium-size enterprises.[3]

An important foundation for this applied work is the pilot program to green supply chains in Mexico, concluded in 2008. Almost 150 companies in 14 different supply chains successfully developed eco-efficiency projects, representing direct benefits of millions of dollars in direct costs as well as savings in water, paper and cardboard, hazardous waste, solvent emissions and CO_2 emissions. Most importantly, it proved to be a positive mechanism to encourage the private sector to improve their environmental performance and provided valuable experience for the design and expansion of similar initiatives in North America. The program is being evaluated with a view to derive lessons learned that are expected to be useful for similar initiatives throughout the region. Ongoing delivery of the training program component is being transferred to local partners in Mexico.

This initiative is also a direct response to Council Resolution 06-06.[4] This challenges multinational automotive companies with supply chains that cross

[1] For example: "Moving Forward with Pollution Prevention in North America: A Progress Update" Prepared by the North American Pollution Prevention Partnership, CEC, 2004. http://www.cec.org/files/pdf/POLLUTANTS/CEC-MovingForward_en.pdf
[2] An example of this is the support of the North American dialogue around the national Pollution Prevention Roundtables, http://www.cec.org/news/details/index.cfm?varlan=english&ID=2504
[3] For example, see CEC (2000) Improving Environmental Performance and Compliance: 10 Elements of Effective Environmental Management Systems and CEC(2006) Successful Practices of Environmental Management Systems in Small and Medium-Size Enterprise: A North American Perspective.
[4] See http://www.cec.org/files/PDF/COUNCIL/Res06-06-Auto-SectorFunding_en.pdf

North American borders to engage their small and medium-size suppliers in improving business and environmental performance through measures such as pollution prevention, improved management of chemicals, enhanced energy efficiency and adoption of best practices to reduce their environmental impact. This project also seeks to develop within the CEC a culture of strategic engagement with the private sector to capitalize on synergies and maximize results.

During 2007/8 the CEC engaged the auto sector, particularly in Mexico and Canada, to promote the creation of business-led initiatives to improve environmental performance of their supply chains. In Mexico a core group of 10 companies is leading the initiative. Issues identified to date include compliance, supply chain processes and communications. In Canada, the core group of companies has identified issues of recycling of plastic products and waste, energy management and water consumption, zero waste and chemicals in products as areas of potential interest. In addition, two *Lean & Clean* manufacturing training sessions are being organized by the CEC in Mexico in 2008.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

Stakeholders include major automotive manufacturers and their suppliers, providers of technical assistance[5] to improve environmental performance of firms, government agencies—encompassing both economic and environmental areas, and trade associations, particularly those with common goals, such as the Green Suppliers Network and the US Suppliers' Partnership for the Environment.

In Canada, Environment Canada initiated the Automotive Parts Manufacturers' Association's Environmental Performance Agreement (EPA). There are some potential synergies between this project and the CEC's initiative, especially with respect to energy and coatings issues. The EPA focused on volatile organic compounds (VOC) and carbon dioxide CO_2 reductions. With respect to VOCs and CO_2 there are therefore parallels. The issue is that a limited number of companies participated in the Canadian program which expired in 2007. Thus, the objective is to increase participation in the Canadian Suppliers Partnership (SP) program.

[5] In Mexico this includes, for example, the Clean Production Centers and in the United States, the Manufacturing Extension Partnerships.

Resource leveraging is core to the design of this project, since it has sought to develop an explicit commitment by the companies to take a leadership role to structure and fund these activities. While funding for the work to date has been provided primarily by the CEC, most of the resources for 2009 will be provided by the member companies. In addition, in-kind support, in terms of sharing existing private or public tools is expected to be significant.

Advisory Groups Related to this Project

No new groups other than the Partnerships itself are proposed for this project. Oversight will be performed by the Trade and Environment Working Group.

Rationale

Council Resolution 06-06 identified that gaining the necessary commitment from this industrial sector (and potentially from the Suppliers Partnership (SP) for the Environment) to implement the project would be an essential step. To this end, it instructed the Secretariat to:

- Ascertain the interest of potential partners in this collaborative effort;
- Gauge the willingness of potential partners to define more specific goals, objectives and measures for the collaboration and obtain commitments;
- Define challenges to the full implementation of this collaboration; and,
- Utilize steps necessary to build capacity for this collaboration.

Activities to date have concentrated on the first two items, although some advance work has been done with respect to activity 3 through the development of a more specific action plan in Mexico. The development of a *North American Roadmap to Green the Auto Supply Chains* as proposed under this project will define the challenges to full implementation of this collaboration at the North American scale, as mandated by step 3. This *Roadmap* will also provide the elements to measure the progress of the initiatives at the North American scale. Recognizing the need to have a roadmap with the full endorsement of national suppliers, as well as to take advantage of existing initiatives, a meeting of the Partnerships and other key stakeholders, including relevant government agencies, will be held to discuss, refine and endorse the *Roadmap*.

The Resolution also recognizes that many such suppliers may not have access to the technical expertise to pursue *green* manufacturing, and expects the partnership to support capacity building by developing tools and training that combine pollution prevention with accepted business approaches. This project proposes to develop this through the existing partnerships developed though the Greening the Supply Chains project and seeking ways for industry to assist in sharing some of these costs as needed. Two initial Lean and Clean manufacturing train-the-trainers workshops were held in Mexico in 2008, rather than conducting individual supplier assessments. Efforts in 2009 will facilitate collaboration among national initiatives, including through exchange of information and tools.

The auto sector is emblematic of the extent of economic integration of North America. This initiative provides an opportunity to bring national efforts by both private and public sector to promote the improvement of their environmental performance into a concerted trinational effort that could serve as a model for other industries. The sharing of relevant national experiences and tools will serve to develop a more efficient platform and avoid duplication of national efforts as well as to maximize their positive impact.

Fulfillment of Strategic Objectives

Within the scope of the Commission's 2005–2010 Strategic Plan, the CEC has sought, over the past four years to expand its engagement with the private sector[6] and has developed a set of activities aimed at improving the environmental performance of the private sector though model compliance approaches.[7]

Information for Decision-making

This project will assist in driving eco-innovation within the auto industry and, as a result, will inform private sector decision-makers of the need to fully integrate environmental drivers within the scope of future investment decisions. As well, it will provide governmental decision-makers with policy information to promote activities such as pollution prevention, end-of-life management, recycling, and recovery of vehicles.

Capacity Building

While auto sector supply chains are integrated in North America, they have not been involved in coordinated and comprehensive efforts to improve their environmental performance. This project will enable action at the North American scale which had not been possible before and which will improve the North American environment.

Trade and Environment

By reducing the ecological footprint of automotive supply chains in North America, this will also result in greener trade.

North American Scope of the Project and Its Relevance to the Three Parties

The auto industry is truly North American in scope, with both original equipment and supply production facilities located in Canada, Mexico, and the United States. The auto parts industry located in Canada (for example) is intertwined with customers across all three countries. This sector has enormous economic importance and improving its environmental performance is a common goal.

CEC Niche and Value Added

The CEC, with its North American focus on trade and environment issues and its previous work in the forging of regional partnerships in this sector is uniquely suited to sponsor this initiative. CEC value added is the capacity to link previously disparate and unconnected supply-chain initiatives into an effective and continent-wide partnership.

Linkages with other CEC projects

While not explicitly linked, this project could potentially link to other CEC areas, such as the SMOC and Air programs. This links will be more relevant in the implementation of the roadmap and of their national action plans.

In addition, this project may link to the project on Competitiveness and Environmental Sustainability, by providing practical insights into the drivers

[6] See Council resolution 05-06. http://www.cec.org/files/pdf/COUNCIL/Resolution-05-06_en.pdf
[7] See Looking forward: the CEC's 2005-2010 Strategic Plan. Page 11 http://www.cec.org/files/PDF/PUBLICATIONS/2005-2010-Strategic-plan_en.pdf

and barriers to improve business environmental performance and its impact on competitiveness.

Activities and Outputs

Key Activities

1. Develop a background paper to serve as the basis for a North American Roadmap to Green the Auto Supply Chains.

2. Host a trinational meeting of key auto sector representatives, including the North American Suppliers' Partnerships to review the Roadmap.

3. Provide strategic support for further collaboration among the national initiatives.

Target Groups

Auto manufacturers and their suppliers throughout North America.

Partners, Stakeholders

Government agencies (Profepa, US EPA, Environment Canada). business associations, such as the US Partnership for the Environment.

Core group of auto sector companies in each country.

These actors have actively participated in CEC efforts at the national level, and their participation is expected to continue into 2009.

Leveraging

The various partners will provide significant in-kind support through their efforts to expand the membership of the national partnerships as well as their expertise. In addition, the operations of the partnerships will be fully funded by its member companies.

Outputs and Associated Timelines

- A report on a North American Roadmap to Green the Auto Supply Chains, assessed and adopted by stakeholders within the Auto Sector.
- A set of tools and relevant information available to all three national initiatives in support of their project objectives and the implementation of the Roadmap.

Anticipated Outcomes and Performance Indicators

Direct Outcomes:

- Commitment of core auto manufacturers and suppliers to green their supply chains (through the adoption of the Roadmap).
- Increased exchange of tools and resources for the Greening the supply chains.

Performance Indicators

- Endorsement of the Roadmap from the three national partnerships.
- Increased relevant materials and information on greening the supply chain and dissemination among the auto sector companies.

Intermediate Outcomes*:*

- A business-driven self-supported North American Partnership to promote greening of the supply chains in North America, particularly of Small and Medium-size Enterprises (SMEs).
- Auto sector suppliers, particularly SMEs, taking action to green their manufacturing.

Performance Indicators

- Financial and logistical resources to sustain initiative, membership of companies in the initiatives, number of SMEs outreached and/or using the tools being shared.
- Actions taken to green manufacturing.

Final Outcomes:

- Reduction of the environmental impact associated with the auto industry.

Performance Indicators

Environmental metrics to be developed as part of the Roadmap.

Timetable, Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

The activities planned for 2009 will allow the CEC to close the support cycle for the auto sector industry in terms of the objectives of Council Decision 06-06.

Target End Date for CEC Involvement

This initiative started in 2006 and by supporting the institutional platform and providing a roadmap for action, the CEC will bring its work to conclusion in 2009. Full and ongoing implementation of the roadmap will be the responsibility of private sector stakeholders and partners.

Sustainability Beyond

Success will depend on the continuity of the initiative in the future of the national initiatives. As stated above, it may catalyze further action by the Parties of the CEC in the implementation of the national action plans and the various components of the North American roadmap.

Communications

Key target audiences for the deliverables of this project include major corporations in the automobile industry with supplier chains that cross North American borders as well as trade associations, technical assistance centers and government agencies in the three countries involved in supporting the auto industry and promoting pollution prevention activities.

Results will be communicated at meetings at the national and trinational level as well as through the web.

Information Management

No specific component is being anticipated in this regard.

Distribution: General
C/OP09/Draft3/PROJ7
ORIGINAL: ENGLISH

Project 7	**Sound Environmental Management of Consumer Electronics**	**Responsible Project Manager at the CEC Secretariat**	José Carlos Fernández
Planned Allocation	2009: C$100,000 Completion of 2008 outputs: C$2,000 Total: $102,000	**Working Group(s) associated with this work**	Trade and Environment Working Group

Objective of Project

This project aims to improve end of life (EOL) management of consumer electronics across North America by supporting:

- the exchange of information among stakeholders concerning existing policy regimes in the region and their environmental and economic performance; and
- knowledge and policy insight on means to address the environmental impacts of the lifespan and disposal of consumer electronics, from a North American perspective.

Background

Project History and Foundation

In 2005, at the instigation of the three North American National Roundtables for Pollution Prevention (NAP3), the CEC initiated a Clean Electronics Pollution Prevention Partnership (CEP3). The CEP3 was aimed at facilitating compliance of the North American electronics industry with new global environmental requirements through pollution prevention strategies, thereby improving the sector's competitiveness and access to global markets.

CEP3 sought to challenge companies that manufactured or imported electrical and electronic equipment into North America to commit voluntarily to eliminate the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBBs), and polybrominated diphenyl ethers (PBDEs). The focus on toxic chemicals created opportunities for collaboration with the CEC SMOC initiative in the delivery of resources and technical assistance for the promotion of these voluntary efforts.

Initial work identified that:

a) The electronics industry is highly diverse with a dominance of off-shore manufacturing; therefore, traditional approaches to pollution prevention might not work in this context. Instead, pollution prevention should be promoted by sharing best practices along the supply chain, promotion of procurement specifications and design for the environment.

b) Leading brand owners were already heavily involved in meeting the European Union's Restriction on Hazardous Substances (RoHS) directive by July 2006, and did not require further recognition or support for their efforts. Opportunities may exist to share best practices with smaller companies along supply chains.

c) Electronic products tend to have short life spans and the infrastructure in North America is inadequate for proper end-of-life management.

On the basis of these findings and in consultation with the CEP3 advisory group, two further studies were commissioned to identify chemical management practices and examine supply chain, procurement and end-of-life management in small and medium-size enterprises (SMEs) in North

America.[1] It was expected these studies would identify valuable elements of a strategy to assist SMEs in the electronics sector to better adapt to the emerging environmental and regulatory challenges. In particular, the CEC's 2008 Operational Plan (Project 3, B5) proposed to "develop and implement a dissemination strategy for the awareness and pollution prevention management tools developed for SMEs."

These studies confirmed the electronics industry supply chain is a multi-tiered, rapidly adaptive and global process. Many components are manufactured off-shore (mostly in Asia) and then shipped to North America for assembly. Less and less large scale original equipment manufacturing (OEM) occurs in Canada or the US. In Mexico, however, there continues to be niche manufacturing of flat screens in the television sector.

Mostly, North American companies in the electronics sector are limited to the design and manufacturing of prototypes for large scale manufacturing overseas. Specialized printed circuit boards are manufactured in the US, Canada and Mexico, generally for local markets, but some are exported to Europe. This brings compliance with the new European RoHS directive[2] into consideration. RoHS compliance varies by product, but North American firms have been exposed to this factor for more than two years.

Obsolete and outdated electronic components and products continue to be both an environmental issue and a public concern, with a multiplicity of approaches being developed to encourage sound EOL management at the sub-regional level. Many challenges exist to ensure adequate management of the large and growing volume of consumer electronics being discarded each year[3].

[1] "*Evaluation of Potential for Improved Environmental Design of Electronics and Electronic Waste Management in North America with a Focus on Supply Chain Environmental Management*"2007

[2] RoHS: "Restriction of the use of certain Hazardous Substances in electrical and electronic equipment"

[3] "*Memorandum on End of Life Management of Electronics in North America*"

Key stakeholders, Resource Leveraging, Partnerships (to date)

Recycling industry leaders, consumer electronics associations, electronics recycling associations, government agencies overseeing the recycling industry.

Advisory Groups Related to this Project

The Trade and Environment Working Group will be the primary oversight body. Depending upon the scope and direction of work it is likely that some collaboration with the Enforcement Working Group and its task forces would be appropriate.

Rationale

In view of the findings cited above, the CEC Secretariat proposes to refocus the CEC's work on consumer electronics towards electronic waste (e-waste) and end-of-life (EOL) management issues in North America.

EOL management systems vary across North America:

- In Canada, each new provincial program results in the establishment of new SMEs to process e-waste. Owners and operators of these businesses come from a wide range of backgrounds. Concern about export of e-scrap to Third World countries, and new business entrants lacking knowledge about the proper way to manage EOL electronics and the chemicals they contain led the Canadian Council of Ministers of the Environment to establish Canada-wide Principles for Electronics Product Stewardship regarding products that should be included in provincial programs.
- In the US, there is a lack of harmonization between state programs, adding a cost burden to manufacturers in complying with multiple requirements. With 10 different state programs, the compliance cost burden may warrant a national solution.
- Mexico does not have regulations requiring manufacturers to ensure the sound management of chemicals in electronics beyond the Comprehensive Waste Prevention and Management Law (LGPGIR) which classifies e-waste as a special handling waste. However, two states, Chihuahua and Jalisco, passed state laws in 2005 and 2007 governing special handling waste, including electronics.

- In contrast, the European system is the most mature, with the Waste Electrical and Electronic Equipment (WEEE) Directive adopted in January 2003 under the principle of Extended Producer Responsibility (EPR).

In addition, the increasing complexity of EOL regulations and policy across North America may result in:

- Added costs and administrative burden for manufacturers to meet varying requirements
- Greater complexity for recyclers who operate across state lines and must follow different rules
- Unequal service for the public
- Greater political complexity and contention as each jurisdiction must determine its own system and gain stakeholder agreement
- Complexity for governmental agencies
- Higher system costs as economies of scale are frustrated by differing standards across different jurisdictions.

This project proposes to encourage better management of end-of-life of consumer electronics in the region by developing a knowledge base to share information on current practices for end-of-life management, including their economic performance.

This project proposes further analysis on each of these aspects from the perspective of sustainability and competitiveness, and in particular, to quantify their economic dimension to better inform the policymaking process. This analysis would include identification of existing and most relevant regulations (tariff and non-tariff barriers, domestic laws, regulations and standards) affecting industrial competitiveness in EOL management of consumer electronics. Some of this work was initiated in 2008[4] and further work will ensure that all the categories have been covered and gaps identified.

Following phase one a second phase will identify the obstacles and/or incompatibilities these measures (tariff and non-tariff barriers, domestic laws, regulations and standards) pose to EOL management of consumer electronics. It will also provide an estimate of additional transaction costs and/or trade benefit/losses that these obstacles create. Given the outcomes from phases one and two, a third phase will provide policy recommendations.

Fulfillment of Strategic Objectives

This project will contribute to strengthening links with the private sector and assist with the improvement of environmental performance. By promoting the creation of local capacity to process e-waste, it will also result in greener trade and the potential to reduce illegal or environmentally inappropriate export of North American e-waste.

By supporting the work of the Free Trade Commission, this project contributes to the fulfillment of the objectives of the NAAEC.

Information for Decision-making

The output of this project will provide key recommendations to governments and the private sector to minimize costs and promote a competitive EOL industry in North America.

Capacity Building

Recommendations stemming from this work are intended to support creation of local capacity throughout North America to manage EOL processes and e-waste in the most environmentally appropriate manner.

Trade and Environment

The project will contribute to reduce concerns over e-waste shipments and promote the diffusion and adoption of best practices to encourage adequate EOL management of consumer electronics.

North American Scope of the Project and Its Relevance to the Three Parties

At the 2007 NAFTA Free Trade Commission (FTC) meeting, NAFTA Ministers agreed to "work with the CEC to explore ways to address the environmental impacts of the lifespan and disposal of consumer electronics." The outputs of this project will be relevant for the three countries.

Greater regional availability of the EOL industry and the emergence of incentives at the regional scale would reduce the costs of EOL management, contributing to the competitiveness of the region.

[4] See project 3, component B: http://www.cec.org/files/PDF/ABOUTUS/OpPlan2008-combinedprojects-e.pdf

While some information resources are available at the national level, the work of the CEC would enhance its sharing and availability at the North American level.

CEC Niche and Value Added

The CEC is well positioned to address end-of-life management of electronics from a North American perspective as the only trinational organisation that addresses continent-wide environmental issues. The FTC statement (cited above) specifically indicates the CEC is a preferred partner to address the environmental impacts of the lifespan and disposal of consumer electronics.

Linkages with other CEC Projects

This project will be closely linked to "Supporting Environmental Sustainability and North American Competitiveness" by informing industry and policymakers on opportunities and best practices to encourage the EOL industry. The project may also benefit from linkage to certain activities and intelligence associated with the CEC project on Trade and the Enforcement of Environmental Laws.

This project will realize synergies (i.e., the need to map processes from a technological and economical perspective) among the two tasks that could allow for a more in-depth analysis in both.

Activities and Outputs

Key Activities

1. Development of a North American knowledge base on EOL regimes and best practices, including information on their environmental and economic performance.
2. Develop a report which will build upon past CEC work to identify the existing and most relevant regulations that are affecting industrial competitiveness in EOL management of consumer electronics in the three countries. A second section would assess these obstacles, including financial estimates of the additional transaction costs or the missed benefits they pose. Finally, it will identify a set of recommendations for the industry and policy-makers. Each of the components should be developed in a step-wise approach to be able to assess progress and guide further phases.

Target Groups

The private sector and governments and of the three countries are the target audience for this project.

Partners, Stakeholders

The private sector (manufacturing companies, recycling facilities), NGOs [e.g., Electronics Take Back Coalition, Electronics Product Stewardship Canada (EPS Canada)] and all levels of government (provincial/state, federal and local).

Leveraging

To be secured.

Outputs and Associated Timelines

- By Fall 2009: A knowledge base in operation with basic information on current EOL regimes and featuring a mechanism to add or update information, as appropriate.
- By end of 2009: A set of recommendations to minimize costs and promote a competitive EOL industry in North America.

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- A better understanding of the different EOL challenges in North America and a set of concrete recommendations for action. Recommendations should include the added-value and challenges of a coherent and comprehensive North American EOL management system.
- Greater availability of information on best practices and effectiveness of EOL regimes in North America.

Performance Indicators

- Recommendations provided in the project are considered in the policies developed by the three governments on the North American perspective of EOL management of electronics.
- Visits to the knowledge base.

Intermediate Outcomes

- A harmonized set of EOL regulations and policy across North America.
- Greater consideration of best practices when designing EOL regimes

Performance Indicator

Development of new policies related to end-of-life management of consumer electronics with references to the knowledge base and the set of recommendations.

Final Outcomes

- Reduced environmental impact associated with consumer electronics.
- Expansion of EOL capacity and improvements in their efficiency and effectiveness.

Performance Indicator

Increased capacity of EOL management throughout North America.

Timetable and Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

This project will be completed by the end of 2009.

Target End Date for CEC Involvement

End of 2009.

Sustainability Beyond

It is anticipated that it would be up to individual stakeholders to make use of or adopt the results of this project. If successful, the project will be sustainable to the extent that the knowledge base is used and expanded in content by the users and that the recommendations are successful in prompting action.

Partnerships will be sought with North American actors to provide long-term support for the update of the knowledge base.

Communications

Key target audiences for the deliverables of this project include the private sector in the North American consumer electronics market. Results will be communicated at the industry level and to policy-makers. Some of the information gathered in this project will serve as the basis for a policy oriented brief that will include the context of EOL management in NA and will provide a set of recommendations for policy makers and industry leaders, including state and provincial governments designing schemes for EOL management as well as specialized trade associations involved in end of life management of electronics.

Information Management

We will initiate a database within the reach of the project funding (the site will be ready for the three countries to include their respective data). However, the long-term updating of the knowledge base will be secured through partnerships.

Distribution: General
C/OP09/Draft3/PROJ8
ORIGINAL: ENGLISH

Project 8	**Trade and the Enforcement of Environmental Laws**	**Responsible Project Manager at the CEC Secretariat**	Marco Heredia
Planned Allocation	2009: C$429,000 Completion of 2008 Outputs: C$5,000 Total: C$434,000	**Working Group(s) associated with this work**	North American Group on Environmental Enforcement and Compliance Cooperation (EWG) Hazardous Waste Task Force (HWTF) and the North American Wildlife Enforcement Working Group (NAWEG).

Objective of Project

This project has three main objectives:

- Expedite the movement of legal materials across borders. This includes support for the trinational efforts of the Parties to implement the *smart borders* plan and related initiatives aimed at facilitating the cross-border movement of goods and services.
- Improve enforcement capacity so that persons or entities illegally shipping or attempting to ship hazardous waste and materials, ozone-depleting substances, protected species and wildlife, or other illegal materials that could threaten human health or the environment in the territories of the NAFTA Parties are stopped from doing so and appropriately penalized.
- Promote better information on North American hazardous waste movements.

Background

Project History and Foundation

The North American Agreement on Environmental Cooperation (NAAEC) underlines the Parties' support for the environmental goals and objectives of NAFTA, including creating an expanded and secure market for goods and services in a manner consistent with environmental protection and conservation, promoting sustainable development, and strengthening the development and enforcement of environmental laws and regulations.

Council Resolution 96-06 established the North American Working Group on Environmental Enforcement and Compliance Cooperation (EWG), composed of senior-level environmental enforcement officials. Since 1996, the EWG has identified the need for improved capacity to track and enforce laws regulating the trans-boundary movements of hazardous wastes and ozone-depleting substances (ODS), and for cooperative approaches concerning the enforcement of domestic laws, including those that implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), through continuous work with the North American Wildlife Enforcement Working Group (NAWEG).

Council resolution 03-08 extends cooperation in the area of hazardous waste, directing the Secretariat to work with the Parties on specific measures to promote the environmentally sound management and tracking of hazardous wastes. In response, the EWG established an *ad hoc* Hazardous Waste Task Force (HWTF) to assist with related measures in the CEC's work program. The Hazardous Waste Task Force will assist in the implementation of the hazardous waste components of this project.

The CEC Strategic Plan 2005–2010 aims to improve compliance with existing environmental laws and strengthen the capacities of the three countries to manage environmental issues of common concern.

In this vein, and pursuant to the development of the 2008 operational plan, the CEC has developed several initiatives to date:

- A pioneering project for the electronic exchange of information from the export request, or notification, and the *consent for importation of hazardous waste* among North American governments to replace a cumbersome paper based approach which contributes little to improving enforcement.
- The first on line training course aimed to build capacity and disseminate information on regulations and enforcement techniques in the ODS area intended for customs and environmental officials, see: www.cec.org/ods
- A project for the electronic exchange of import and export data for proposed movements of hazardous waste between the North American governments to improve data quality and allow these governments to reduce their administrative burdens.
- A process for sharing information on non-compliant imports entering North America from a common approach.
- A workshop on environmental compliance that will reach out to the import-export community and provide input to the CEC-sponsored Compliance Assistance Center: www.bordercenter.org.
- A seminar on judicial training aimed at strengthening capabilities and exchanging expertise and best practices among judges, prosecutors and law enforcement officials, held in Mexico City in November 2008.

By completing these activities, the Parties have made progress towards addressing threats from illegal products, non-compliant imports or banned substances entering North America, improving enforcement capacities, levelling the *playing field* for business across the three countries by reducing potential advantages from lack of effective enforcement of environmental laws.

Key stakeholders, resource leveraging and partnerships (to date)

Stakeholders include all the government enforcement and compliance agencies represented in the CEC's Enforcement Working Group and Hazardous Waste Task Force. The Royal Canadian Mounted Police in Canada, the Federal Police and the General attorney's office (PFP and PGR, accordingly) in Mexico and the Department of Justice in the US are also key stakeholders of the environmental enforcement authorities in the three countries. Customs agencies are also key players that can either benefit or leverage to the project.

More recently, commercial trade corridor associations[1] are starting to play a role in promoting continental trade and will support the CEC to identify and pilot projects to explore and report on the use of cutting edge technology for effective compliance monitoring in North America.

Advisory Groups Related to this Project

This project will benefit from the engagement and oversight of the EWG and affiliated enforcement agencies, as well as the participation of customs officials in specific tasks.

Also, The Hazardous Waste Task Force currently assists in the development of the hazardous waste portions of this project (electronic exchange of data for the import – export of hazardous waste). The HWTF is composed of senior officials and IT specialists in the management area of hazardous wastes.

Rationale

According to the International Crime Threat Assessment conducted by the US government, local and international criminal syndicates worldwide earn about US$22–31 billion annually from hazardous waste dumping, smuggling

[1] Trade corridor organizations followed on the footsteps of NAFTA , typically organized by businesses and metropolitan and state government agencies. The most important of these include: CASCADIA http://www.cascadiaproject.org/;CANAMEX http://www.canamex.org/index.asp; Plains-to-Plains http://www.portstoplains.com/; La Entrada al Pacifico (LEAP) http://www.la-entrada-al-pacifico.com/ ; NASCO http://www.nascocorridor.com/ ; Border Trade Alliance http://thebta.org/ ; Gulf of Mexico States Accord http://www.gomsa.org/ ;Quebec/New-York Corridor http://www.corridors.ca/index_en.html;;CANAM-BTA http://www.canambta.org/

proscribed hazardous materials, and exploiting and trafficking in protected natural resources. To date, it is estimated that global smuggling of ODS range from 7,000 ton to 14,000 tones a year, with an economic profit of US$25 to 60 million to the organized crime syndicates. Much of that illegal trade is targeted to enter North America.

By 1 January 2010, all the consumption and production of chlorofluorocarbons (CFCs) will be banned globally, pursuant to the international commitments made under the Montreal Protocol for controlling the trade in ODS. This global ban represents a challenge for environmental and customs authorities in North America, as large amounts of CFCs are likely to continue to be distributed at a global scale after the ban, since countries in Asia and South America are still producing CFCs. Canada and the United States ceased their production of CFCs in 1995 and Mexico did so in 2005, five years before its commitment date under the Montreal Protocol.

By 2009, the CEC will disseminate the training course completed on ODS and will cooperate with the UNEP and UNIDO to reach out to customs and environmental inspectors with participation of experts from Canada and the US, and report on the efforts, opportunities and challenges for effective enforcement. The Mexican government, under the framework of its national plan for the elimination of CFCs, administered by the United Nations Industrial Development Organization (UNIDO), will direct $25,000.00 to organize a national workshop for updating and training customs and environmental inspectors in the prevention and identification of illegal shipments of ODS.

The Parties have identified congestion in the ports of Los Angeles and Long Beach in the United States as the reason that more Asian imports are entering North America through Mexican ports on the Pacific coast, later making their way into the US and Canada. As smugglers could potentially use Mexican Ports to introduce non-compliant imports to North America, customs and environmental officials from the three countries will share intelligence data and relevant information to protect the region from the illegal import of ODS and will be able to also address other global challenges such as illegal green house emissions from such substances.

The universe of potential threats posed by illegal and non-compliant imports and by banned substances is rarely viewed as the most critical issue in the environmental arena to be addressed. However, the probability of such shipments arriving at North American ports of entry is extremely high and, as a result, so is the potential for harm to public health, environmental health and the economy.

By developing these activities the Parties also contribute to regional strengthening of border security and global environmental strategies such as the green customs carried out by the UNEP.

Preventing illegal shipments from leaving their point of origin is the best strategy; failing to do that, stopping illegal material at points of entry is often the only effective measure.

Officials and inspectors in our three countries require having access to state of art information and techniques to take effective action against illegal shipments, non-compliant imports or banned substances in North America. In this regard, the CEC will support the Parties by putting together an on line training course in the field of hazardous waste aimed at environmental and customs inspectors to raise awareness of the regulations and specific activities to effectively enforce regulations in the three countries. This will benefit other officials in the three countries such as transport inspectors. It will assemble information now only available in several different documents. It will also bring a common level of understanding and a common approach to the import and export of hazardous waste and materials.

With mapped information on the facilities exporting and importing hazardous waste and materials across North America boundaries enforcement agencies will be in a better position to take coordinated action and trace routes and frequency of shipments while directing resources and efforts to promote legal trade.

The electronic exchange of hazardous waste export/import information will assist in providing the best information and best techniques against illegal hazardous waste shipments. By replacing a paper-based approach with an electronic one, it will improve overall export/import data quality, enhance enforcement capabilities, support border security, facilitate the adoption of more advanced tracking technologies, and allow governments to reduce administrative burdens. A major limitation of the current paper-based system is that it does not allow for the most efficient and effective sharing of data. Under the current system of exchanging information by fax, mail or cable the North American governments must enter notice information manually into multiple data systems, which can result in delays and data entry errors. If information is exchanged electronically, the government of the exporting

country would send the notice information and consent or objection to the importing country, saving the governments both the time and money of data being entered multiple times, and improving the accuracy of this information.

Each one of the management authorities will allocate resources to build their own part of the information exchange system and the CEC will support and build the framework for such exchange to occur. Once this happens, the CEC will deliver the project for the parties use and future development.

In general, a more informed public is in a better position to comply with environmental regulations. In this regard, the CEC is in a good position to bring together management and enforcement authorities with the private sector from the three countries, to promote and facilitate trade and compliance of environmentally regulated commodities and materials across North America.

The CEC is a vehicle for information and understanding of environmental law in North America. It is also in an optimal position to communicate the main features of such law and regulation by presenting and communicating such mandates through its website.

Fulfillment of Strategic Objectives

This project addresses information for decision making, capacity building and trade and environment from the CEC Strategic Plan 2005–2010.

This is being accomplished largely by ensuring that officials in customs, environment, and law enforcement are informed of environmental laws affecting trade, that exporters and others have easy access to export requirements for environmentally sensitive materials, and by training customs and other law enforcement officials to be better able to expedite legal shipments across borders. The project overall responds to the concerns of a variety of stakeholders: government agencies, trade associations, transporters and nongovernmental organizations who are interested in strengthening cooperation on the development and improvement of environmental laws, regulations, procedures, policies and practices and who are working to enhance compliance with, and enforcement of, environmental laws and regulations.

North American Scope of the Project and its Relevance to the Three Parties

The NAAEC underlines the Parties' support for the environmental goals and objectives of NAFTA, including creating an expanded and secure market for goods and services in a manner consistent with environmental protection and conservation, promoting sustainable development, and strengthening the development and enforcement of environmental laws and regulations.

CEC Niche and Added Value

Environmental enforcement officials need to count on information and intelligence data that can lead to more coordinated action and effectiveness across North America. The CEC is in a unique position to facilitating the exchange of such information among countries. With these activities the CEC will consolidate its efforts to address non compliant imports entering North America and will reach out to customs and other enforcement agencies in the three countries.

The CEC occupies a niche to support national efforts in the three countries to count on safe and smart borders while fostering trade and environmental compliance. The EWG has also reached out to customs and other enforcement agencies that can add value to its work.

Given its mandate and institutional expertise, the CEC is uniquely positioned to bring together these various efforts. In the field of monitoring environmental compliance, it represents a unique opportunity to engage people directly involved in cross border trade in enhancing compliance with environmental laws. This opens the possibility to create networks and synergies with private enterprises that are using monitoring and radio frequency identification systems (RFID) to explore the potential of technology to foster environmental compliance and promote law enforcement. Trade corridor associations are ideal platforms to assess environmental performance from a strategic perspective, while allowing governments to reach out to the enterprises involved in the import–export of merchandise across North America. The results of the workshop and the reports will provide a rationale for further action in this area.

Finally, at its 2008 session, the Council acknowledged the advantages of coordinated work addressing non compliant imports and expressed their interest in expanding the scope of activities which could include further collaboration with customs agencies to stop illegal shipments from entering North America and step up intelligence led enforcement.

Linkages with other CEC projects

This project is in line with the CEC's mandate to increase the capacity of the three countries to identify and address trade related environmental concerns

and achieve mutual benefits for trade and the environment, and facilitate trade and expedite transboundary shipment of merchandise while enhancing environmental compliance and enforcement.

Potential linkage is also feasible with the North American Air Working Group derived form the outputs of task number 3 of this project.

Also, there is a linkage to the proposed CEC project work in the area of Trade, Transportation and the Environment.

Activities and Outputs

Key activities

Task 1 will facilitate the interchange of expertise and cutting-edge knowledge on pertinent regulations and the *modi operandi* used by smugglers of banned substances by bringing together enforcement experts from Canada and the US to an International workshop on illegal traffic of ODS, to be held in Mexico aimed for environmental, customs and other enforcement officials such as federal police and personnel from the General attorney's office.

The CEC will assist in supporting the participation of experts from Canada and the United States in the workshop. In tandem with this, the CEC will work with the Parties in offering techniques for the identification of banned gases and disseminate the CEC ODS online course already available on line.

This activity will help count on safer trade and will support North American initiatives to strengthen security and safety across our shared borders, such as the Security and Prosperity Partnership. The CEC will also be able to report on the reach and usefulness of the undertaken efforts, while identifying the key challenges and opportunities for enforcement in this field by 2010. The participation of Canada and the US is an added value that can bring more organizations/initiatives to leverage to this effort. The governments will also assess the need for further action at the CEC or at any other avenue for effectively addressing the illegal trade of ODS into North America.

Task 2 is directed to complete the hazardous waste online training course targeted for customs and environmental inspectors in our three countries and have it in full operation by the fall of 2009. This will help customs and environmental inspectors and officials from other law enforcement agencies access state of art information on regulations and *modi operandi* for smuggling this kind of materials. The general module of the course will be disseminated publically by the CEC while the second module will be delivered to the countries for further development. This action will conclude in 2009.

Task 3 will provide the opportunity to strengthen the process of exchanging information and intelligence on those products and commodities that are non compliant with North American environmental regulations, and that could pose health and environment threats. It will allow identification of commodities, mechanisms, routes and patterns for the import of illegal and non-compliant imports or banned substances, and determination of the extent and the timing of future activities. The parties will assess completion of the current work on the import of non compliant goods that exceed air emission regulations and will asses the opportunity to work cooperatively in other areas for 2009 and beyond.

Task 4 is aimed to complete work on the electronic exchange of export request information and the import consent for hazardous waste in North America, and the final publication of *Crossing the Border*—a report that identifies the main areas and opportunities for sound management of transboundary hazardous waste shipments across North America. Both activities will be completed in 2009.

Task 5 will be directed to the determination of the criteria and mapping elements required for constructing a data layer in Google Earth to identify the importing and receiving facilities for hazardous waste involved in transboundary shipments across North America, using information from national pollutant release and transfer registers (PRTR) and other available sources. With this, enforcement agencies will be in a better position to identify routes, intersections, key crossing points and direct enforcement actions to those areas where needed in order to monitor compliance.

Information sources include the US- Canada agreement concerning the transboundary movement of hazardous waste, the US-Mexico Agreement (La Paz agreement), and the Border 2012 program goals. The Secretariat will conduct a scoping meeting in 2009 to agree on the elements and the approach to make information available for the three countries.

Task 6 will support development and utilization of a report concerning the CEC's judicial training activities undertaken to date under the 2005 – 2010 Strategic Plan. This report will be a reference for the understanding of the

main features of North American legal systems as put into practice. This report will provide a rationale and a reference for the institutionalization of environmental training for the judiciary in Mexico. The results will be also useful to determine mechanisms, stakeholders, timing, leveraging and steps forward to deliver judicial training to Mexican authorities. Canadian and US expertise will add value and will help build a North American perspective for the administration of environmental legislation.

Task 7 includes the development of two environmental compliance workshops in partnership with trade corridor associations and their membership, one in the Mexico - US border region and another in the Canada – US border region. These will bring together the private sector with government officials to:

1) Address the main issues related to effective environmental compliance and deliver a report to the Parties with recommendations and feedback on the main opportunities and challenges to that end; and,
2) Report on the benefits and potentials of the use of cutting-edge technology and compliance monitoring systems, such as the Radio Frequency Identification (RFID) in order to review the adoption of policies and programs to foster and adopt such systems.

Task 8 will facilitate the exchange of information, lessons learned, and best practices in North America through an updated Environmental Law Enforcement and Compliance Cooperation website and outreach activities to share information and best practices on North American enforcement and compliance activities.

Target Groups and Stakeholders

- Enforcement officials from the three countries
- Law enforcement agencies from the three countries
- Prosecutors
- Customs agencies
- National Autonomous University of Mexico and other universities and research institutions
- Trade corridors associations
- Non governmental organizations
- Customs brokers associations
- Entrepreneurs and private public involved in transboundary trade across North America.

Leveraging

Partners will add significant in-kind support to accomplish these tasks and activities. Notably, the Mexican Government will contribute with US$25,000.00 for the accomplishment of task 1.

The National Autonomous University of Mexico will also partner and leverage for the publication of the 2008 judicial seminar report and path forward.

Outputs and Associated Timelines

Task	Output	Timeline
1	An international workshop on controlling ODS regulations.	Spring 2009
	Report on training reach, opportunities and challenges for 2010	Summer 2009
2	Hazardous waste on line training course	Fall 2009
3	Enhanced activities of the cooperative working group and report on results to date	Summer 2009
4	System to the electronic exchange of information on information for the import–export of hazardous wastes	Fully operation by the Fall 2009
5	Scoping meeting to identify elements and reach of the activity	February 2009
	Layer with information on the facilities importing exporting hazardous waste.	November 2009
6	Publication	Fall 2009
	Meeting for the adoption of environmental training	Fall 2009
7	Environmental workshops to address North American private sector	Spring and fall 2009
	Report on the benefits and potentials of tracking technology.	Fall 2009
8	Web site update	To be updated starting early 2009

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Increased awareness and knowledge of the regulations pertaining to controlling the traffic of ODS and improved understanding of the smuggling activities in this field, in order to better protect our region.
- Consolidation of techniques for the identification and combating of illegal shipments of non-compliant goods and commodities from outside North America.
- Supporting the Parties' efforts to promote compliance of environmentally regulated materials and commodities across North American borders while reaching out to the private sector.
- Identify the potential and opportunities for the use of cutting edge technology to monitor environmental compliance and increase the understanding of illicit activities to effectively address illegal traffic of environmentally regulated materials.
- Supporting the Parties in the identification of generation sources and receiving facilities of hazardous waste, in order to streamline action and foster environmental compliance and effective law enforcement.
- Identification of the opportunities and key stakeholders to starting a process to institutionalize environmental training for Mexican judges and prosecutors with support of the North American partners.
- Facilitation of the exchange of information on lessons learned and best practices in North America in environmental law enforcement and compliance.
- Facilitation of the dialogue and sharing of information between environment, transport and customs officials in order to facilitate the assessment regarding the environmental challenges posed by increased cross-border trade and transportation related infrastructural developments.
- Reach out to the public interested in transboundary shipments of merchandise across North American borders to facilitate trade and ensure environmental compliance and monitoring.

Intermediate Outcomes

- Authorities better prepared to combat illegal traffic of ODS and hazardous waste by stopping illegal shipment into North America.
- More awareness and understanding of the trends and activities, sectors and commodities which do not comply with North American environmental regulations.
- Better coordination between authorities in addressing threats from non-compliant imports and shipments from outside North America.
- Governments that can act efficiently, based on the best information available, for the effective management and compliance enforcement of environmental regulations related to hazardous waste.
- Authorities better prepared to institutionalize environmental training for judges and prosecutors in Mexico, contributing to an application of environmental regulations effective throughout North America.
- North American public better informed of the tri-national efforts in environmental law enforcement and compliance.
- Facilitate trade across borders while ensuring compliance with environmental regulations.
- Expedite environmentally sound shipments of merchandise across North American border while assuring environmental governance.

Final Outcomes

- Environmentally safer and greener borders; authorities better informed on illegal trafficking of ODS and hazardous waste, trends, source areas and monitoring challenges, in order to ensure effective enforcement in North America.
- Substantive contribution of the Parties to effective enforcement, compliance and application of law by the judiciary throughout North America.
- Effective participation and involvement of senior officials in enhancing cooperation in environmental law enforcement and compliance.
- A better protected North American environment through better coordinated enforcement authorities.
- Reduced environmental impacts from harmful substances throughout North America and environmental governance.
- Sustainable trade across North American Borders and effective enforcement of environmental regulation in our shared region.

Performance Indicators

Indicators vary according to the task.

Task 1

- Number of trainers trained.
- Number of customs points of entry strengthened and of trade routes more protected against smuggling of ODS.

Task 2

- Course completed and fully operating.
- Number of trainees in the course and of hits on the course website.

Task 3

- Number of commodities identified as potentially suspect.
- Number of intelligence reports produced and shared.
- Number of operational teleconferences, meetings and other communications effectively exchanging information and practices related to this project.
- Number of enforcement cases generated from initial intelligence reports and added value for effective law enforcement practices in the three countries.
- Number of commodities identified in two or three countries as non compliant.

Task 4

- Capability to electronically exchange information on the request for export and consent for import of hazardous wastes.
- Number of electronic transactions effectively transmitting hazardous waste export/import data among the Parties.

Task 5

- The identification of the criteria, elements and sources of information for a Google Earth mapping tool of the facilities generating and receiving hazardous wastes across North America, and a functioning prototype of this tool.
- Number of website hits on this tool.

Task 6

- Publication of the November 2008 Judicial Seminar, including recommendations and conclusions for institutionalizing environmental training for judges in Mexico.

Task 7

- Number of enterprises engaged in pilot projects to monitor environmental compliance in North America.
- Number of pilot projects to monitor environmental compliance.

Task 8

- Updated website on the environmental law enforcement and compliance program.
- Number of hits on this website per month.
- Number of regular users of the website.
- Number of activities performed involving information exchange and best practices shared with governmental, nongovernmental organizations and agencies.

Timetable and Project Completion

Task 1 will conclude in 2009. The report on these activities will allow the Parties to consider further action in the future.

Task 2 will be completed in the fall of 2009. The first module will be posted on the CEC website. The second module will be delivered to the parties for further development/use of this tool.

Task 3 will be strengthened to produce effective action to be pursued in the following years. Enforcement agencies will assess further development of these activities and extend the work to other enforcement agencies or areas depending on global trends of illegal trade. Each government will leverage to this activity in the future.

Task 4 is expected to be completed in 2009 and will be delivered to the parties for their development and use.

Task 5 will provide the basis for further, more operational activities, such as identification of patterns, trends, routes, and for potential real-time monitoring and use of cutting-edge technology such as RFID.

Task 6 will be completed in 2009 and will provide a rationale for the institutionalization of environmental training for judges in Mexico with support from the US and Canada in order to strengthen a North America perspective on judicial application of the legislation.

Task 7 will be completed in 2009 and the reports will give the parties the rationale for further development of action in this area.

Task 8. The content of the enforcement web page will be updated continuously by the Secretariat at the enforcement working group web site <www.cec.org/enforcement>.

Sustainability Beyond

Task 1. The global trend of CFC traffic could modify and/or demand further action in this area.

Task 2. Each country will follow up this activity in the future.

Task 3. Each country will follow up this activity in the future.

Task 4. Each country will follow up this activity in the future.

Task 5. Provision of such information on the NAAF is a continuing task of the Secretariat.

Task 6. This activity will be accomplished in 2009.

Task 7. With the information made available to the Parties, further action in this area remains to be determined.

Task 8. Website maintenance and content update is continual.

Communications

The participating agencies will be responsible for communicating the development and results of the course. The CEC will provide outreach and post the results of its activities via (www.cec.org/enforcement).

Information Management

The CEC will support the Parties by facilitating the timely exchange of information. To that end, the Secretariat will use CEC Web resources to outreach to Party enforcement agencies and stakeholders.

The CEC will support the Parties in developing the schema and framework for the exchange of electronic information and will support national efforts to successful transmittal of data. The CEC will develop those processes for the assurance of the quality of the information to be posted at the CEC website.

Also, the CEC will continue to work with the North American Atlas Coordinating group to support include a data layer to illustrate those facilities which import/export hazardous waste across the borders. Further, the CEC will continue to provide online resources to help facilitate the adoption of the hazardous waste online course, and other online information products, such as the Environmental Law Enforcement and Compliance area of the CEC website.

Distribution: General
C/OP09/Draft3/PROJ9
ORIGINAL: ENGLISH

Project 9	**Sound Management of Chemicals**	**Responsible Project Manager at the CEC Secretariat**	Luke Trip
Planned Allocation	2009: C$487,000 Completion of 2008 Outputs: $C13,000 Total: C$500,000	**Working Group(s) associated with this work**	Sound Management of Chemicals Working Group (SMOC WG)

Objective of Project

The Sound Management of Chemicals (SMOC) initiative provides a framework for "regional cooperation for the sound management of the full range of chemical substances of mutual concern throughout their life cycles, including by pollution prevention, source reduction and pollution control."[1]

The CEC Council mandated a new direction for the initiative in 2008, moving from actions to reduce risks from specific chemicals to an approach that reflects the emerging global nature of chemicals management. This new direction focuses on strategies to catalyze cooperation in the following four areas: reducing risks from chemicals of mutual concern, improving the environmental performance of specific industrial sectors, building an equitable foundation for chemicals management among the three countries, and enhancing regional environmental monitoring and assessment.

These areas are compatible with the Plan of Implementation of the World Summit on Sustainable Development (WSSD) for 2020 and the subsequent Dubai Declaration on a Strategic Approach to International Chemicals Management (SAICM). The new direction puts emphasis on improving outreach to stakeholders as partners, aligning with North American priorities, and establishing stronger linkages with key international initiatives, such as the United Nations Environment Programme (UNEP), and the Organisation for Economic Co-operation and Development (OECD) Chemicals Risk Management Programme.

Background

Project History and Foundation

- Council Resolution 95-05 mandated the development of North American Regional Action Plans (NARAPs) for certain persistent and toxic substances as a priority for the CEC. It also established a working group, composed of two senior officials selected by each Party, which is concerned with the regulation or management of toxic substances and is tasked to work with the CEC to implement the decisions and commitments set forth in the Resolution. Over the next several years, work on current NARAPs will continue, as will the role of the SMOC Working Group (WG) in advising the Council and the Parties on NARAP implementation.
- In addition, and as mandated under Council Resolution 08–06, (Instruction to the Sound Management of Chemicals Working Group of the Commission for Environmental Cooperation to Promote the Sustained Sound Management of Chemicals in North America), the CEC

[1] CEC Council Resolution 95-05: Sound Management of Chemicals, <http://www.cec.org/pubs_docs/documents/index.cfm?varlan=english&ID=148>.

has initiated a strategy for developing a North American chemicals management agenda.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

- A major part of the new strategic direction of the SMOC WG is the emphasis on continued input from stakeholders on current and future initiatives. The SMOC WG proposes to engage interested stakeholders in discussions at the Public meeting through panel sessions and throughout the year by maintaining correspondence and seeking input on specific projects from interested and expert stakeholders. For 2009, the key non-government stakeholders include chemical industry associations of the three countries as well as indigenous communities, NGOs and academia, with a focus on the Petroleum sector industry at the annual public meeting. JPAC will participate in the public meeting.
- Long term capacity projects such as the development of a Mexican Chemicals inventory will be developed with International Funding Agencies considered as a possible resource contributor. The CEC will provide seed monies and the Parties will contribute in-kind expertise and other resources as deemed appropriate.
- This new SMOC strategy includes advancing the Parties' shared international objectives, including those under the Strategic Approach to International Chemicals Management (SAICM) as well as consideration of the August 2007 announcement during the North American Leaders' Summit on a Regulatory Cooperation Framework. Partnerships with other chemicals' related interests such as UNEP, OECD and PAHO will be considered.
- Under the recently signed *Statement of Intent on North American Chemicals Cooperation*, the North American Ministers for the Environment committed to a Framework for Regulatory Cooperation that furthers existing policy commitments under our North American chemicals cooperation, enhances existing activities under the Sound Management of Chemicals (SMOC) initiative of the Commission on Environmental Cooperation (CEC), and enhances informal coordination and cooperation efforts at the bilateral and trilateral levels. The Framework also reflects the goals of North American Montebello Leaders Statement of 21 August 2007.

Advisory Groups Related to this Project

- The SMOC WG and subsidiary task forces responsible for delivering NARAPs and other tasks will continue to provide recommendations to Council for the sound management of chemicals of mutual concern to North Americans. Currently, work under active NARAPs is conducted by implementation task forces. Projects mandated under the new SMOC direction of Resolution 08-06 will depend upon the continued trilateral participation of experts from the Parties, coordinated by the Secretariat.

For more information, please go to the following link: <http://www.cec.org/programs_projects/pollutants_health/project/index.cfm?projectID=25&varlan=english>.

Rationale

Risks of human and environmental exposure to persistent and toxic chemicals addressed by the CEC SMOC initiative come from individual chemicals, families of such chemicals, and industrial sectors and technologies utilizing or producing these chemicals. In general terms, the SMOC initiative endeavors to reduce risk of exposure to toxic chemicals and minimize long-range atmospheric and aquatic transport of chemicals across borders.

Fulfillment of Strategic Objectives

The SMOC initiative supports the CEC strategic priorities on Information for Decision Making, Capacity Building, and Trade and Environment, as described in the CEC's 2005–2010 Strategic Plan.

Information for Decision-making

Information obtained or derived by the SMOC initiative will help policy-makers prioritize options for managing chemicals of mutual concern as they make decisions relating to risk, from both trilateral and domestic perspectives.

Capacity Building

Capacity will be strengthened by increasing the comparability, reliability, relevance and availability of data and information on toxic chemicals in the North American environment. The new direction will focus on quality

assurance and quality control of analytical methodologies and on data management and reporting. The Parties will have access to validated information that will provide a foundation from which to make decisions regarding the sound management of chemicals.

Trade and Environment

The SMOC initiative supports work under the CEC's Trade and Environment area, as described in the CEC's 2005–2010 Strategic Plan. It aims to promote the sound management of chemicals while facilitating the movement of chemicals and their products across borders without compromising human health or the environment.

North American Scope of the Project and Its Relevance to the Three Parties

While the new alignment of the SMOC initiative places considerable emphasis on capacity building, all three Parties will benefit from the improvements in environmental quality resulting from the significant reduction in atmospheric loading of chemicals such as DDT, lindane, mercury and, in the future, polybrominated diphenyl ethers (PBDEs).

CEC Niche and Value Added

Cooperation on the management of toxic chemicals continues to be a key initiative of the Parties as described in the Strategic Plan for 2005–2010.The North American approach to sound management of chemicals has been a model for other international fora and provides a mechanism for disseminating and collecting information of importance to the Parties on other domestic and international initiatives.

The SMOC initiative will position the CEC and the SMOC WG to align this important area of work with the CEC's upcoming 2010–2015 Strategic Plan and the global direction of the WSSD Plan of Action to 2020.

Linkages with Other CEC Projects

The SMOC project links directly to the Chemicals aspect of the PRTR exercise by providing a specific set of data on substances identified by the SMOC WG. The proposed chemicals inventory will provide validated information on chemicals traded and processed in North America. The NARAPs on mercury, lindane, and dioxins/furans and HCB will provide specific information which can be directly ascribed to the North American Atlas

State of the Environment reporting will benefit from detailed data on levels of toxic substances in the environment.

Activities and Outputs

Key Activities

Key activities will be aligned with the new SMOC direction. Ongoing efforts for NARAP implementation of specific chemicals initially required by Council—i.e., implementation of the mercury and lindane NARAPs; development and implementation of the dioxins, furans and hexachlorobenzene (D/F/HCB) risk reduction initiative; and strengthening linkages between SMOC and Trade and Environment activities; will be joined by the development and implementation of new strategies for catalyzing cooperation. Here, a priority will be the establishment of a national chemicals inventory for Mexico.

Target Groups

Target audiences for the SMOC initiative specifically include Salud, Health Canada and USCDC, as well as INE and IMTA of SEMARNAT, Environment Canada and the USEPA. Nongovernmental target audiences include industry stakeholders such as CCPA, ACC and ANIQ, as well as academia, ENGOs, indigenous communities, and the general public.[2]

Partners, Stakeholders

Partners participating in the implementation of the SMOC initiative through membership in the working groups and implementation task forces include Health Canada, Environment Canada, US EPA, USCDC, and Mexico's

[2] Salud—*Secretaría de Salud* (Secretariat of Health); USCDC—US Centers for Disease Control; INE—*Instituto Nacional de Ecología* (National Institute of Ecology); IMTA—Mexican Institute of Water Technologies; Semarnat—*Secretaría de Medio Ambiente y Recursos Naturales* (Secretariat of the Environment and Natural Resources); US EPA—US Environmental Protection Agency; CCPA—Canadian Chemical Producers Association; ACC—American Chemicals Council; ANIQ—National Association of Chemical Industries (Mexico)

Semarnat, INE and Salud.[3] Participating stakeholders will be determined on a case-by-case basis as areas of work within SMOC's new direction are established by the working group in 2009. The SMOC program will also foster continuing partnerships with the IJC, the GLBTS and Border 2012.

Leveraging

The SMOC Project relies on the in-kind contributions of experts from the Parties, as well as guidance from stakeholders, such as JPAC, and interested citizens. Academia contributes expertise on an as-needed basis. Leveraging of significant resources from the World Bank, PAHO and the GEF will be considered with seed money and expertise support to Mexico from the SMOC project. Under SAICM's Quick Start program, Mexico has accessed funds (UK, DEFRA US$100K) to promote further development of an electronic database for the Chemical inventory project based on support from the CEC.

Outputs and Associated Timelines

Associated outputs and products include:

- in 2009, the SMOC WG will have two face to face meetings, including one with stakeholders, as part of the continued development of a common North American approach to chemicals management by 2020;
- approval and publication of the NARAP assessment document describing the history and current benefits derived from work on DDT, chlordane, PCBs mercury, lindane, dioxins/furans and HCB (early 2009);
- a workshop on sources of dioxins/furans and HCB (spring 2009);
- a capacity building workshop for long-range transport modeling in Mexico, focused on dioxins/furans and HCB, or a sector-specific air monitoring exercise (early 2009);
- an advanced capacity building workshop on risk assessment in Mexico, focused on dioxins/furans and HCB, and transferable to other POPs in media such as soil and food (early 2009);
- a North American Chemicals Conference will be held in 2010 with the objective of broadening our stakeholder base, improving linkages with other regional and international chemicals initiatives, and creating opportunities for dialogue among experts and decision-makers on specific issues related to chemicals management;
- completion of an analysis of the current legal framework to develop a national in-use chemicals inventory for Mexico, including comparability with ongoing inventory programs in Canada and the United States (2009);
- as a new substance, an inventory of PBDE releases in Mexico will be undertaken and a proposal for reducing risks of PBDEs in North America will be developed (late 2009); and
- other capacity building projects developed as a result of emerging priorities during late 2008 and early 2009.

Work under the SMOC project will be coordinated with the monitoring and assessment aspects of these programs as described in the Environmental Monitoring and Assessment (EM&A) project operational plan.

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Government agencies involved in the sound management of chemicals are continuously apprised of developments with their North American partners.
- North Americans will benefit from increased awareness of impacts from toxic substances on human health and the environment.
- The SMOC WG is committed to greater involvement of the public and private sectors to reduce the risk of exposure.
- Information is available for developing risk reduction strategies and decision making on chemicals management.
- Dialogue will be promoted among technical experts related to chemicals management.

[3] IJC—International Joint Commission; GLBTS—Great Lakes Binational Toxics Strategy.

Performance Indicators

- Active involvement of the SMOC WG members.
- Stakeholder participation at annual public session and stakeholder support activities of the SMOC WG.
- Organization of a North American chemicals conference, to be held in 2010.
- Initiation of a chemicals inventory in Mexico.
- Completion of inventory of PBDE sources in Mexico and recommendations for reducing risk.

Intermediate Outcomes

- In aligning with the new direction proposed for the SMOC initiative, longer-term, fiscally sustainable initiatives will ensure Mexico's capacity to participate in monitoring and assessment of substances deleterious to human health and the environment. The sustainability of Mexico's Proname initiative will benefit from seed financing by the CEC and the in-kind support from Canada and the United States in approaching international funding institutions, such as the World Bank and the Global Environment Facility (GEF).
- The chemicals inventory will put Mexico on a more equal footing with similar programs already existing in Canada and the United States. Such information enhances citizens' ability to assess risks and to be adequately prepared for chemical exposure emergencies.
- Workshops on atmospheric modeling will permit scientific dialogue among experts from the three countries, leading to greatly enhanced knowledge of pollutant pathways and exposure potentials.

Performance Indicators

- A comparable North American Chemicals inventory.

Final Outcomes

- Reduction in risk of exposure to the priority toxic substances and to substances determined to be of common concern.
- While DDT and lindane are being significantly reduced, new substances, such as PBDE flame retardants, and SMOC Working Group deliberations for new initiatives such as nanotechnology, will benefit from a SMOC assessment.
- Improved infrastructure, nationally and trilaterally, for managing environmental and human health exposures to toxic substances will lead to reduced residues of toxics in traded foodstuffs and other commodities.
- Promotion of regional programs on a more international scale as examples of successful initiatives to reduce risk of exposures.

Performance Indicators

- Indication of whether the various aspects of the SMOC initiative have achieved their desired final result will be known principally through feedback from the Parties and stakeholders, as well as from continuous monitoring and testing. Comparisons of baseline data with current or future values will indicate a measure of success or renewed efforts.
- Workshops and projects will be seen as successful if overall program sustainability is achieved—in other words, if the Parties or stakeholders establish the project or necessary measures for capacity building as a sustainable domestic priority.
- Success will also be manifested in the improved environmental policies that result from scientifically validated information being utilized by decision makers.

Timetable, Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

In response to the need to strengthen the Parties abilities to assess and manage chemicals of concern, as outlined in the 2005–2010 strategic plan, the implementation of the approved NARAPs on lindane and mercury, and further development in direction on dioxins/furans and HCB, according to timelines established for these initiatives.

Target End Date for CEC Involvement

The mercury NARAP is proposed to be closed as a CEC initiative in 2010, lindane by 2016, and dioxins/furans and HCB by 2014.

The target date for completion of the PBDE work and closure of the task force is 2011.

The chemicals inventory exercise is slated for completion and transfer to Mexico as a sustainable domestic initiative. A contract is currently in place to examine the legal basis for creating an inventory. Once this analysis is complete (end of 2008/early 2009), the group should be in a better position to determine the scope of the project, the tasks required and associated timelines.

Sustainability Beyond

- The North American chemicals management agenda for the sound management of chemicals encourages creation of new initiatives that will support new work, and with varying timelines.
- The mercury and lindane NARAPs will be turned over to the responsible national agencies according to the timeframe above in anticipation of domestic implementation activities. The dioxins, furans and hexachlorobenzene plan will be implemented according to the current capacity building initiatives being successfully put into effect in Mexico.
- Annual stakeholder meetings with the Parties will ensure that dialogue is maintained between the Parties and stakeholders. Best results will come from combining this dialogue with regular meetings and conference calls of the SMOC Working Group and its task forces and teams.
- Sustainability is a key aspect of all projects within SMOC. When a project commences, its objectives are to attain sustainability, as deemed appropriate by the Parties, of the various capacity building aspects.

Communications

All SMOC undertakings contain communication strategies as an integral component of their actions. Recognizing the new direction of the SMOC initiative, the currently available outreach methods and material will be re-examined and redrafted, as necessary. Project implementation groups will work with the Secretariat and its Communications personnel to disseminate information generated from actions of the NARAPs to national decision makers, industry and academia.

The SMOC Working Group has a well-established relationship with its stakeholders and seeks to enhance their engagement in current and future activities. Annual stakeholder meetings will be held in geographic regions where there are facilities or stakeholders with specified interest in the program or where the work to be undertaken can benefit from closer proximity to the area of concern. In 2009 the SMOC WG proposes to meet with petroleum sector interests in Calgary, Alberta, Canada.

Information Management

Most data generated via the NARAPs and the new strategic plans are of a technical nature and require manipulation through statistical analysis and trends development, as applicable. Electronic storage and retrieval mechanisms for items such as an updated inventory of mercury, lindane and other POPs emissions in Mexico will be required. Information products and reports developed through the SMOC initiative will be available in electronic format on the CEC website.

Distribution: General
C/OP09/Draft3/PROJ10
ORIGINAL: ENGLISH

Project 10	**Monitoring and Assessing Pollutants across North America**	**Responsible Project Manager at the CEC Secretariat**	Luke Trip
Planned Allocation	C$360,000 Completion of 2008 Outputs: C$5,000 Total: C$365,000	**Working Group(s) associated with this work**	Environmental Monitoring and Assessment Working Group (EM&A WG)

Objective of Project

The purpose of this project is to assist the Parties in increasing the comparability, reliability, relevance and availability of data and information on toxic substances in the North American environment. Specifically, it seeks to improve the generation and management of information needed to identify and assess trends and concerns related to contaminants and stressors that affect the environment and human health. It will also help advance the Parties' shared international objectives, including the Plan of Action of the World Summit on Sustainable Development (WSSD) for 2020 and the subsequent Dubai Declaration on a Strategic Approach to International Chemicals Management (SAICM), as well as consideration of stronger linkages with key international initiatives, such as the United Nations Environment Program (UNEP), and the Organisation for Economic Co-operation and Development (OECD) Chemicals Risk Management Programme.

While considerable emphasis is on the process of capacity building, all three Parties benefit by the improvements in environmental quality resulting from the significant reduction in environmental loading of chemicals such as DDT, lindane, mercury and, in the future, polybrominated diphenyl ethers (PBDEs). Building capacity to reduce significant sources of these substances within one North American country is of considerable benefit to ongoing domestic programs elsewhere in North America.

Background

Project History and Foundation

The project originates in the North American Regional Action Plan (NARAP) on Environmental Monitoring and Assessment (EM&A). This NARAP was created through Council Resolution 02-08 to assist the Sound Management of Chemicals (SMOC) Working Group and its implementation task forces in meeting the environmental monitoring and assessment obligations identified or implied under Council Resolution 95-05, and in substance-specific NARAPs developed pursuant to that Resolution.

Through Council Resolution 08-06, the priority work areas of the SMOC initiative were realigned. The four main areas of work now involve the following:

1. Establishing a foundation for chemicals management in North America.
2. Developing and implementing a sustainable regional approach to monitoring, including environmental and human biomonitoring.
3. Reducing the risk from chemicals of concern to North America.
4. Improving the environmental performance of sectors.

Of these four areas, the second, relating to monitoring, applies in particular, but not exclusively, to the Environmental Monitoring and Assessment project. The other three can be considered to be the focus of the SMOC project. The SMOC Working Group also agreed that communications and outreach should be a guiding priority of the program and thus allocated part of the operational budget to this important effort.

Co-chaired by representatives of each of the three Parties, a Standing Committee oversees and assists the implementation of the EM&A NARAP and related tasks within the project. Over the next few years, the Standing Committee will not only concentrate on EM&A project implementation but will also assist the SMOC Working Group in developing its information priorities to 2020, cognizant of the direction of the WSSD Plan of Action.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

A major part of the *cooperative strategy* for the sound management of chemicals is an emphasis on the expert input from stakeholders on current or future initiatives. The key stakeholders/organizations who will actively participate in the EM&A work are projected to be those in academia, industry, and environmental NGOs from all three countries. The EM&A Standing Committee will coordinate with the Secretariat to engage other international, regional and national government agencies with relevant expertise.

Advisory Groups Related to this Project

Co-chaired by representatives of each of the three Parties, a Standing Committee oversees and assists the implementation of the EM&A NARAP and related tasks within the project.

For more information, please go to the following link: <http://www.cec.org/programs_projects/pollutants_health/project/index.cfm?projectID=25&varlan=english>.

Rationale

This project fosters and encourages cooperation and collective action in planning, conducting and reporting information from baseline surveys, monitoring, modeling and research regarding the status, trends and effects of persistent and toxic substances. It supports the new initiative under the chemicals management project to build a compatible foundation of information from which the Parties can make informed decisions.

Fulfillment of Strategic Objectives

The EM&A project is linked to Information for Decision-making through its mandate for improving monitoring, modeling and research on a North American scale, in order to assess the progress of the CEC's SMOC initiative but also to continuously improve the availability of information for decision-making at many levels. Thus, this project supports and contributes to other priorities of the CEC and the Parties, including the inclusion of environmental data into the North American Atlas, and the assembly of data to develop viable indicators for state-of-the-environment reporting.

Information for Decision-making

Certain persistent, bioaccumulative, toxic chemicals (PBTs) released to the environment as a result of human activity are transported long distances through air and water and pose unacceptably high risks to the environment, to ecosystems and to human health. Convenient and dependable access to and dissemination of relevant, reliable and comparable monitoring information, along with sound interpretive assessments based, in part, on that information, are crucial to the confirmation and quantification of progress made. Regulators will benefit from this validated information in proposing appropriate control mechanisms where applicable. Environment and health agencies at federal and state level will benefit.

Capacity Building

This project develops scientifically sound information by building capacity through regional and international cooperation in efforts to measure, monitor and assess toxic substances across the continent. A major focus will continue to be assurance and control of the quality of both chemical analyses and the resulting data. Specifically, a project to engage the pertinent national laboratories in a QA/QC exercise along with an ongoing validation program will ensure accurate and precise data is generated.

Trade and Environment

The generation of validated data will improve capacity to measure toxic residues in traded goods and foodstuffs.

North American Scope of the Project and Its Relevance to the Three Parties

Mexico identified as a national priority the development and implementation of a domestic monitoring and assessment initiative for chemicals. The availability of such information is important for risk analysis, risk assessment, risk management and the communication of risks to targeted groups and to the general population.

This project will allow North American monitoring of toxic substances through the availability of comparable trinational data. The benefits to Canada and the United States are not only indicated in reductions of PBT air toxics through long range atmospheric transport but also in reporting, analyzing and comparing data on chemicals in commerce among the three countries to facilitate comparable risk management approaches that would enhance protection of human health and the environment, while providing cost-effectiveness for business and government in facilitating trade.

CEC Niche and Value Added

The CEC's mandate and prior work to foster cooperation among Canada, Mexico and the United States in the pursuit of the sound management of chemicals and related initiatives makes it a unique platform to accomplish the work proposed here. A cooperative regional approach to monitoring is critical to understanding short- and long-range transport mechanisms of chemicals in air and water and to monitoring emissions from chemicals and products in trade throughout their life cycles. Developing and implementing an integrated North American monitoring network will enable decision-makers to identify areas that are the most affected on a regional scale. In addition, a regional approach to monitoring will help link the effects of environmental policies and chemicals management. Short-term local monitoring initiatives can provide limited focused information, while a long-term approach to regional monitoring provides value added in more robust information about long-term trends in substance levels and allows for the detection of changes.

Linkages with Other CEC Projects

Environmental monitoring and assessment activities are directly linked to the SMOC project, as their primary purpose is to guide the SMOC initiative and to help assess progress achieved under substance-specific NARAPs. The EM&A efforts also link directly to the PRTR exercise by providing a chemical-specific set of data. They provide validated information on chemical residues and shipments for the enforcement group and information on chemicals traded and processed in North America. Information generated can be directly ascribed to the North American Atlas through the development and utilization of standardized protocols. State of the Environment reporting will benefit from detailed data on levels of toxic substances in the environment.

Activities and Outputs

Key Activities

Key activities will focus on multiple trilateral monitoring initiatives that will be developed and undertaken, including monitoring for mercury in air and water, lindane in dairy products, dioxin/furans emissions from specified sectors and PBDEs in both humans and the environment. Data from these projects will support decision makers who need information to promote national and trilateral policy directions, as well as support the development of baseline and hotspot maps for persistent toxic substances.

Target Groups

Target audiences for the SMOC initiative include the national and state health and environmental agencies of all three governments, as well as stakeholders in all three countries, including chemical, petroleum and agricultural industry, academia, environmental NGOs, indigenous communities, and the general public. Validated information regarding the North American situation will also be used by international organizations such as GRULAC, SAICM and UNEP.

Partners, Stakeholders

Partners participating in the implementation of the EM&A project include Health Canada, Environment Canada, the US EPA and CDC, and Mexico's Semarnat, INE and Salud as well as other potentially impacted agencies.[1]

[1] EPA—Environmental Protection Agency; CDC—Centers for Disease Control; Semarnat—*Secretaría de Medio Ambiente y Recursos Naturales* (Secretariat of the Environment and

Participating stakeholders will be invited to contribute expertise on a case-by-case basis as areas of work within SMOC's new direction are established. A stated target of the new direction is to actively solicit participation from affected stakeholders at the SMOC public meeting sessions.

Leveraging

The EM&A project relies on the in-kind contribution of experts from the Parties as well as guidance from Stakeholders such as JPAC, and interested citizens. Academia contributes expertise on an as-needed basis. Leveraging of significant resources from the World Bank, PAHO and GEF will be undertaken with seed money and expertise support to Mexico from the EM&A project.

Outputs and Associated Timelines

Key outputs from this project include further development and implementation of an integrated trinational monitoring network; promotion of sustainable environmental monitoring and a human bio-monitoring infrastructure in Mexico; as well as support for a Mexican funding proposal to an international funding institution (IFI). Specific outputs and approximate timelines are:

- Identification of index sites for establishing baseline data for toxic chemicals and implementation of data collection activities (2009);
- Publication and distribution of the "Monitoring programs in North America" document (early 2009);
- A report on mercury in fish from the Lake Zapotlán watershed and other ecosystems in Mexico (early 2009);
- Follow-up exercise on quality assurance/quality control (QA/QC) for metals and POPs analysis, with an emphasis on Mexico (2009);
- Promotion of a trinational laboratory validation exercise for POPS and heavy metals (Summer 2009);
- Approval and publication of the Guidance document for trilateral bio-monitoring exercises (early 2009);
- Workshop on dioxins/furans atmospheric modeling (summer 2009); and
- Continuation of QA/QC testing and analysis of lindane in Mexican dairy products (2009).

Work under the EM&A project will be coordinated within the Sound Management of Chemicals program, as described in the SMOC project operational plan.

Anticipated Outcomes and Performance Indicators

Direct Outcomes

First-level effects of the outputs include: improved understanding of QA/QC requirements for information reporting; an improvement in environmentally beneficial behavior by impacted sectors through presentation of validated data on species and levels of contamination; capacity building to permit analysis and presentation of risks; and international cooperation in efforts to measure, monitor and assess persistent and toxic substances across the continent and allow comparisons to other regions.

Performance Indicators

- Validated information for assessing risks associated with exposure to toxic substances.
- Confidence and validity in data resulting from QA/QC procedures (capacity building).

Intermediate Outcomes

A domestically sustained network of national monitoring sites in Mexico under the *Proname* initiative which will generate information on the status of environmental and human health trends for decision makers and provide input to the Mexican NIP under the Stockholm Convention.

Information on monitoring initiatives in North America will direct scientists to improved methodologies and data. The potential risk of exposure to selected toxic substances will be clarified for action in North America.

Analytical results will be validated by uniform, consistent and sustained laboratory validation exercises in North America, with Mexico benefiting

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Natural Resources); INE—*Instituto Nacional de Ecología* (National Institute of Ecology); Salud—*Secretaría de Salud* (Secretariat of Health).

through demonstration of its capacity as a center of excellence for Latin American countries and others.

Atmospheric modeling will be undertaken and utilized in Mexico to augment similar programs in Canada and the United States, with potential for mapping in the NA Atlas.

Analytical capacity improvements in Mexico will enhance confidence in databases and promote compliance with the Stockholm Convention.

Performance Indicators

- Harmonization of monitoring information collected in the three countries.
- Inclusion of the Proname initiative in Mexico's Stockholm Convention national implementation plan (NIP) report.

Final Outcomes

The information generated through the EM&A project will provide the three national governments and stakeholders with meaningful insight into the levels and impacts of contaminants in North America, thereby assisting policy-developers to focus on priorities for reducing environmental impacts and risks associated with exposure to toxic substances. It will also lead to greater North American policy coherence through the provision of compatible chemical information. A sustainable, long-term environmental monitoring and assessment program for North America will ensure valid trends analysis and promote effective and efficient priority action determination by decision makers, as well as providing an audit mechanism to ensure anticipated actions are realized.

Performance Indicators

- Increased accessibility to and availability of reliable data on toxic substances in North America.

Timetable, Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

Promotion of comparable, reliable, relevant and available data and information on toxic substances in the North American environment is an ongoing process. Improving the generation and management of information needed to identify and assess trends and concerns related to contaminants and stressors that affect environmental and human health is also an ongoing process.

Annual stakeholder meetings with the Parties, organized to ensure that an active dialogue is maintained between the Parties and the stakeholders, combined with regular meetings and monthly conference calls by the EM&A Standing Committee and its working groups, will ensure that promotion of new actions is maintained.

Target End Date for CEC Involvement

The objective of the EM&A project is to support the confirmation and quantification of progress made with respect to substances being addressed under the SMOC project. As described in Resolution 08-06, SMOC is a long-term project with no specific target end date for CEC involvement. However, individual activities under the EM&A project that relate to specific substances or areas of capacity building have target end dates for CEC involvement, as follows:

- Develop and validate trilateral laboratory capacity for analysis of samples and comparison of results across North America. The requirements for this activity are determined on an annual basis. In 2009 the group will complete:
  - The development of protocols for sampling analysis and QA/QC.
  - Trilateral laboratory verification through calibration of reference standards and validation of data compatibility from analyses of contaminants in dairy samples.
- Development of capacity for sophisticated atmospheric mercury measurement in Mexico. Expected end date is May 2009
- Baseline data set of lindane levels in dairy products in Mexico. Expected end date is December 2009

- Establishing a dioxins and furans ambient air monitoring network: The current focus is verifying the data and its interpretation. Expected end date is December 2010, after which Mexico will evaluate the continuation or modification of the network.
- Support for the establishment of Proname, Mexico's comprehensive environmental/human monitoring and assessment initiative. Expected end date for CEC involvement is 2009 but this is contingent on Mexico's successful bid for funding from an international funding institution such as the GEF.
- Emissions inventory and expertise transfer is being led by the Secretariat. The preliminary work described in the OP is projected to end in Dec 2009. Consultations with national experts will determine if a similar project should be recommended in 2010, or if national sustainability of the priority has been achieved.

Sustainability Beyond

Individual projects may have a finite period which will be determined by the SMOC WG as authorized under Resolution 08-06. While the mercury NARAP will be closed in 2010, the EM&A activities are envisaged to continue to ensure that the anticipated results are realized. Similar assurances will be developed for the other authorized NARAPs and Strategic Plans as they are implemented.

At the start of a specific initiative, objectives are set to attain sustainability in all aspects of capacity-building projects.

Communications

The SMOC Working Group has a well-established relationship with its stakeholders, which directly benefits the EM&A project. Stakeholder engagement in current and future activities will occur during project implementation and may involve development of outreach materials, organizing public sessions at SMOC meetings, holding joint meetings with other CEC groups and participating in conferences and workshops organized by others. Public consultation events, sponsored by the Standing Committee and the SMOC Working Group, as well as reports submitted to the Council and the CEC's Joint Public Advisory Committee, will provide required levels of accountability.

Information Management

As the information generated by this project may be of a technical nature and require assessment through statistical analysis and trends development, electronic storage and retrieval mechanisms will be required. Much of the data is intended to be amenable to mapping and, thus, comparability and compatibility are of utmost importance. The data will be presented in such a way that mapping and geographic information system (GIS) referencing can be facilitated.

Accessing outside funding may require sharing information with agencies such as the World Bank, the Pan American Health Organization (PAHO), the Global Environment Facility (GEF) and others, in order to fulfill contractual partnership agreements.

Distribution: General
C/OP09/Draft3/PROJ11
ORIGINAL: ENGLISH

Project 11	**Enhancing North America Air Quality Management**	**Responsible Project Manager at the CEC Secretariat**	Orlando Cabrera-Rivera
Planned Allocation	C$405,000	**Working Group(s) associated with this work**	North American Air Working Group

Objective of Project

The objective of this project is to provide a more complete North American picture of air quality and air emissions to support decision-making on air quality management.

This will be accomplished by:

- identifying air quality-related information and capacity needs of the Parties;
- helping to ensure that the capacity exists to develop comparable air quality-related information and programs for North America;
- developing information products to identify emerging trends and issues; and
- informing decisions relevant to the shared environmental interests of the Parties.

Background

Project History and Foundation

In 2001, with Resolution 01-05, the CEC Council agreed to work towards promoting comparability of air emissions inventory information in North America. Since then, the CEC has pursued two goals in this regard:

1) facilitating the development of comparable air emissions data for use in trans-border air quality planning, and

2) enhancing the public availability of air emissions information in North America.

The CEC carried out extensive work in the years 2003–2004 in promoting the development of North American air emissions inventories, by supporting Mexico's first national air emissions inventory in a manner that directly supports transborder air quality planning, as well as meeting Mexico's planning needs. The first Mexican National Emissions Inventory was completed in October 2006, and included emissions of criteria air pollutants for the year 1999.

In 2007, the Parties charged the North American Air Working Group (NAAWG) to review the current air quality work and to formulate a comprehensive vision for enhancing North American Air Quality Management for 2010–2015. The Council directed the NAAWG to develop an implementation strategy for cooperation on air quality (Air Strategy) as outlined in the 2010–2015 North American Vision, which had five fundamental objectives:

- develop capacity for self-sustaining inventories and ambient monitoring;
- achieve comparability and synchronicity of inventories and monitoring capabilities;
- develop meaningful and comparable data and analyses;

- map air quality trends, impacts and air quality strategies; and
- facilitate coordination and effectiveness of air quality policies, strategies and voluntary programs.

Consequently, in 2008 the CEC Secretariat completed a comprehensive assessment of North American air emissions inventories and air quality monitoring networks. This assessment provides a basis for the development of the Air Strategy document. In addition, with CEC support, portions of the on-road mobile, point, and biogenic source components of the Mexican National Emissions Inventory have been updated for the data year 2005, resulting in significant progress towards the comparability and synchronicity of North American emissions inventories.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

Partners involved in related air quality work include US EPA, Semarnat, Environment Canada, Mexico's INE, CEC, Western Governors' Association, the Great Lakes Commission, and individual states and provinces.

The work being done through the CEC program for North America complements ongoing efforts of these various partners in the area of air quality management, and addresses the need for comparability and compatibility of information, policies and programs across the continent.

Advisory Groups Related to this Project

The North American Air Working Group (NAAWG) is the main advisory group on this project. Frequent communications between the CEC and the NAAWG, and partner organizations ensures complementarity of efforts and quality project outcomes.

Rationale

It is recognized that emissions monitoring and inventories are high priority areas for cooperative work, to provide a more complete picture of North American air quality and air emissions, and thus protect and enhance the North American environment. However, differences in capacity to collect air emissions information can hinder the development of sound North American air quality assessment and management activities. Consequently, the momentum is strong for developing common methods, techniques and capacities for estimating air emissions, collecting ambient emissions data, and for managing the collected information in a manner that improves its accessibility for the Parties and the public.

Fulfillment of Strategic Objectives

The activities involved in this project are consistent with the specific priorities linked to fulfilling the 2005–2010 Strategic Plan, and with the Council's directive on air quality.

Information for Decision-making

Air emissions inventory information is fundamental to identifying and estimating the contribution of key source sectors to local, regional and global air quality, thus helping decision-makers design and prioritize their air quality management options. Similarly, ambient air monitoring provides air quality conditions data to inform decision-makers of reduction steps necessary in a specific region. Coupled with air quality modeling, emissions inventories and ambient air quality monitoring can help identify important source regions that affect air quality in downwind and cross border locations, making this project relevant to decision-makers in all three countries. They also provide the public with basic information on local air quality and the environmental performance of emission sources located in their communities.

Capacity Building

Comparable emissions inventories and reporting efforts, and relevant scientific information, are essential for the creation of comprehensive and coherent North American air quality management initiatives. Working with Mexico to develop the updated inventories must focus on building capacity for Mexico to provide comparable inventory updates in 2010–2012 and beyond. Another objective is to provide a forum to bring together North American air quality experts from the scientific and government communities to exchange current information that can impact public policy.

North American Scope of the Project and Its Relevance to the Three Parties

The CEC project is consistent with the Strategic Plan developed by the Parties and with the Council's directive on air quality. Furthermore, the project activities complement the Parties' other trilateral and international

commitments to share air emissions information and to collaboratively reduce air pollution, including the US-Canada Air Quality Agreement, Mexico-US La Paz Agreement (currently being implemented via the Border 2012 Program), and certain activities pursuant to the Security and Prosperity Partnership.

Under the Border 2012 Program, the Western Governors Association is involved in coordinating the development and improvement of air pollutant emissions inventories along the US-Mexico border. The results of these efforts, along with the CEC's will contribute to the successful completion of the 2005 Mexico's National Emissions Inventory.

The USEPA, Environment Canada, SEMARNAT and Mexico's Federal Electric Power Commission are involved in several projects looking to improve the characterization of emissions from Mexico's electric power sector. The resulting information will contribute to improvements in Mexico's national inventory and will provide the Parties with quality information for use in addressing air quality issues associated with long-range transport of air pollutants.

CEC Niche and Value Added

The CEC provides the framework that permits the Parties to exchange information and work cooperatively in addressing issues related to emissions inventories and ambient monitoring, which will inform air management strategies. At this time, there is no similar project that addresses the air quality management needs of all three countries. In collaboration with its partners at the national and state-province levels, and by leveraging work taking place in border areas of certain regions, the CEC is well-placed to bring together the expertise and methodologies for developing consistent techniques and capacities to improve air quality management across North America.

Linkages with Other CEC projects

Updating the *North American Power Plant Emissions* database and report will provide supplemental information for Mexico's mercury emissions inventory being developed with the CEC's Sound Management of Chemicals (SMOC) Program, the North American Atlas Project, and the Trade and Enforcement of Environmental Laws Project.

The project also has linkages with work being done under the CEC's North American PRTR project, particularly in the area of air releases from sources not required to report under the national PRTR programs.

Activities and Outputs

Key Activities

- Draft and present to Council the North American Air Quality Strategy for 2010–2015, based on the Air Vision approved by the Council in 2007, and the Comprehensive Assessment of North American Air Emissions Inventories and Ambient Air Monitoring Networks completed in 2008.
- Update components of the 2005 Mexico National Emissions Inventory (MNEI), using comparable tools and methodologies to those used in the United States and Canada, and build capacity to ensure Mexico's ability to update its inventory. The updated inventory will be completed in 2009, and includes the following components:
    - Completion of point and mobile source components, including Mobile6 adaptation, and study design for $PM_{2.5}$ emission factors development, and
    - update of selected point and area sources.

  The resulting products of this effort will be: 1) the establishment of a process to gather the base-level activity data necessary to estimate air emissions, 2) a quality assurance/quality control plan for emissions inventory development, and 3) an emissions inventory database.
- Update the CEC's Power Plant Emissions database and report for the 2005 data year. This will allow tracking of changes in emissions, the assessment of comparability of emission estimates for pollutants of special interest (criteria, GHG, and mercury), and the provision of base level information for bi- and trinational air quality management initiatives of the Parties. It will also supplement the mercury emissions inventory for Mexico under the SMOC Program.

- Explore use of AIRNow International to make North American air quality information available to the public in a comparable manner.
- Support tri-national capacity building workshops in Mexico to exchange information about scientific findings that can impact public policy on air quality issues. Topic areas include developments on methodologies for emissions inventory preparation, new ambient monitoring and modeling techniques, and impact on air quality from importation of non-compliant non-road motor vehicles.

Target Groups

The main target groups include national, regional, and state/provincial agencies working on related efforts.

Partners, Stakeholders

The North American Air Working Group (NAAWG) and the Secretariat will collaborate, through regular meetings and conference calls, to review and monitor the progress of the projects, discuss and assess current and future project needs and priorities, offer guidance and strategies for improvement, and review relevant documents and deliverables.

The NAAWG and the CEC Secretariat will conduct discussions with the three countries, including specific partners mentioned above (US EPA, SEMARNAT, Environment Canada, Mexico's INE, CEC, states and provinces), to determine ways to improve adequacy and comparability of air quality monitoring networks, and enhance data compilation, analyses, and data/information dissemination.

Leveraging

In conducting the main activities of this project, the CEC has secured the cost-effective collaborations with key partners that will contribute information and expertise necessary to enhance and successfully complete the project.

The Western Governors Association efforts in developing air pollutant emissions inventories along the US-Mexico border will provide supplemental information to Mexico's National Emissions Inventory, especially for source categories under state jurisdiction not covered by federal reporting requirements.

Cooperative work with Environment Canada and USEPA mobile sources research laboratories to establish the study design for $PM_{2.5}$ emission factor development for on-road mobile sources in Mexico. This collaboration will reduce the cost of the study design, provide consistent methodologies across the region, and allow the use of data already developed by recent efforts in Canada and the United States.

The Great Lakes Commission's sponsored emissions inventory development work conducted by the Great Lakes states and the Province of Ontario will provide vital quality information for updating the North American Power Plant Emissions database and report. Approximately one third of the sources included in the 2002 report are located in the Great Lakes region.

In addition, Projects focusing on the characterization of emissions from Mexico's electric power sector, such as Canada-Mexico work under the Security and Prosperity Partnership, and USEPA-Mexico will result in improvements to Mexico's NEI, and will provide supplementary information for use in updating the North American Power Plant Emissions database and report.

Co-sponsors of the tri-national capacity building workshop on scientific findings that impact public policy on air quality issues include INE, the Molina Center for Energy and Environment, Semarnat, and Mexican state environmental protection agencies. In-kind support from USEPA, Environment Canada, and other North American academic institutions is also expected.

Outputs and Associated Timelines

- North American Air Quality Strategy for 2010–2015 (April 2009)
- Updated components of the 2005 Mexico National Emissions Inventory (MNEI), with the following resulting products (July 2009):
    1. the establishment of a process to gather the base-level activity data necessary to estimate air emissions;
    2. a quality assurance/quality control plan for emissions inventory development;
    3. an emissions inventory database;

Note: this activity incorporates work to complete mobile sources data collection that was planned but not completed in 2008.

- Updated CEC Power Plant Emissions database and report for the 2005 data year (December 2009);
- Workshop to address and prioritize action items identified on the North American Strategy for Air Quality Management related to ambient air quality monitoring (December 2009); and
- Conduct trinational capacity building workshop in Mexico to exchange information about scientific findings that can impact public policy on air quality issues (October-November 2009).

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Preparation of Strategy for enhancing North American Air Quality Management: defining objectives, tasks, infrastructure and associated resources necessary to achieve comparability among the three countries' emissions inventories and air quality monitoring systems.
- Completion of major components of the updated MNEI, as specified under "Activities and Outputs" above.
- Updated key information on emissions from the electricity generating sector for use in advancing air quality initiatives, climate change mitigation strategies, and determination of environmental performance.
- Consistent information to facilitate sound air quality management decisions in all three countries.
- Improved understanding of scientific issues affecting air quality management policy.

Performance Indicators

Completion of the key components of Mexico's 2005 NEI

- Updated North American Power Plants Emissions database and report.
- Completion of the Strategy for Enhancing North American Air Quality Management, 2010-2015, and presentation to Council for adoption.
- Effective exchange of information between the academic community, air quality planners, and stakeholders on recent advances in air pollution research.

Intermediate Outcomes

- Infrastructure that allows the three Parties to exchange information and work cooperatively in addressing issues related to emissions inventories and ambient monitoring, which will inform air management strategies.
- Increased capacity to enhance the comparability and synchronicity of ambient air monitoring and emissions inventory information collection and analyses by following agreed upon standards, protocols, and procedures across the three countries.

Performance Indicators

- Tri-national agreement on monitoring network and related data improvement plan; at least one aspect of planned modifications begun.

Final Outcomes

- Development of, and access to, comparable air quality management information.
- A more complete North American picture of air quality and air emissions that will support decision-making on air quality management.

Performance Indicators

- Comparable emissions inventory development schedules.
- Increased reliability and accessibility of emissions and ambient air quality data.

Timetable, Project Completion and Sustainability Beyond

The key activities under this project will be completed in 2009. The work for 2009 will provide a foundation for the efforts to be taken under a North American Air Quality Strategy for 2010–2015.

Culminating Steps in Achievement of Program Objectives

The CEC completed a comprehensive assessment of North American air emissions inventories and air quality monitoring networks. This assessment provides a basis for the development of the Air Strategy document that will be presented to Council in 2009. In addition, with CEC support, portions of the on-road mobile, point, and biogenic source components of the Mexican National Emissions Inventory have been updated for the data year 2005, resulting in significant progress towards the comparability and synchronicity of North American emissions inventories.

Target End Date for CEC Involvement

All tasks described in this project are slated for completion in 2009. Subsequent collaboration pursuant to the Air Quality Strategy is subject to the determination of the CEC Council.

Sustainability Beyond

The sustainability of the work will depend upon the strength of the links and infrastructure that will allow the Parties and stakeholders to continue their cooperative work on air quality related issues.

Communications

Communications and outreach will depend on progress in updating the emissions inventories and will be complemented by the Parties' air experts as part of their overall strategy for air quality activities.

The 2010-2015 Strategy for North American Air Quality will be submitted to Council for approval at its 2009 meeting.

The workshop summary will be posted on the CEC's website.

Information Management

This project will require the coordination and exchange of information on existing air quality and emissions reporting systems managed by the three Parties.

The project also involves the development of electronic databases that will allow the efficient storage of, and access to, air pollutant emissions information. The databases will also support web mapping applications, and be used in other CEC initiatives.

Reports developed through this project will be available in electronic format on the CEC's website.

Additional details related to information management will be developed following discussions of NAAWG.

Distribution: General
C/OP09/Draft3/PROJ12
ORIGINAL: ENGLISH

Project 12	**Tracking Pollutant Releases and Transfers in North America**	**Responsible Project Manager at the CEC Secretariat**	Orlando Cabrera-Rivera
Planned Allocation	C$451,000	**Working Group(s) associated with this work**	North American PRTR Officials

Objective of Project

The main objectives of the project are:

- to compile and disseminate information on the amounts, sources, and management of toxic contaminants from industrial activities in North America; and
- to promote the use of this information for the development of sound initiatives that will result in the reduction of industrial releases and transfers of pollutants of concern across the region.

Background

Project History and Foundation

Begun in 1996, the CEC's North American Pollutant Release and Transfer Register (NAPRTR) project has been a key component of the CEC's ongoing work on pollutants and environmental health. The NAPRTR project collects and analyzes information from the PRTR programs of Canada, Mexico and the United States on the amounts, sources, and handling of toxic chemicals released or transferred from industrial facilities. Where pertinent, additional sources of data and information might also be used to supplement PRTR data and enhance understanding.

This information is made available to a spectrum of users, including local governments, industry, nongovernmental organizations, and the general public, through the CEC's flagship publication, *Taking Stock*, and the *Taking Stock* web pages and searchable database, at <www.cec.org/takingstock>. Together with the PRTR Officials of the three countries, the NAPRTR Project team works on the implementation of the *Action Plan to Enhance the Comparability of Pollutant Release and Transfer Registers in North America*.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

A key element in the provision of information to stakeholders from the three countries is the annual NAPRTR Consultative Group meeting. This event brings together stakeholders such as: government PRTR officials and state, provincial, and municipal representatives working on PRTR or similar inventory initiatives; representatives of reporting industries; international PRTR organizations, nongovernmental organizations working on pollution prevention and health; and any other stakeholder wishing to learn about and have input in the work of the NAPRTR Project.

The nature of this project is one that uses existing resources and adds value to the individual national PRTR programs.

Advisory Groups Related to this Project

The CEC's NAPRTR Project Consultative Group is an ad-hoc advisory group consisting of a variety of stakeholders, including the PRTR officials of the three countries. Many of the CG members are regular participants of the annual CG meeting, providing input for the NAPRTR Project and the *Taking Stock* report and website.

Rationale

Activities under the NAPRTR project support specific objectives and priorities stated in the CEC's 2005–2010 Strategic Plan:

Information for Decision-making

The NAPRTR Project provides information relating to the sources, amounts and handling of toxic chemicals released or transferred by industrial facilities in Canada, the United States, and Mexico. The *Taking Stock* report brings together this information in a format that allows stakeholders to understand the context and limitations of PRTR data, as well as areas for further improvement. The report also features special analyses of releases and transfers from specific sectors, or of certain chemicals, which can provide additional insights for decision-making.

This project aims to provide information to support sustainable environmental policies and practices throughout North America that promote reductions in pollutant releases from industrial activities. It seeks to encourage relevant decision-making activities by governments, industry, and non-governmental organizations, as well as to equip the general public with information concerning environmental issues. Examples of how the *Taking Stock* report and database have been useful to decision-makers include:

- analyses of releases and transfers from specific sectors, providing information to the Parties about inconsistencies in data from the three countries
- analyses of data submitted and identification of "outliers", or suspect data – communication of this information to the Parties, leading to improved data quality
- use by NGOs such as Environmental Defence (Canada) for their reports on releases and transfers from facilities in the Great Lakes region
- increased awareness and use of national PRTR data, due to outreach efforts (informal survey) about PRTR data in indigenous communities in Canada-US and US-Mexico border regions
- anecdotal evidence of use, by PRTR reporting facilities, of the comparisons and rankings in the *Taking Stock* report to improve their environmental performance.

Capacity Building

Through this project, the three Parties work together on the identification of needs and corrective actions for consistent data collection, comparability, and quality across the PRTR systems in North America. The trilateral data analyses conducted under the NAPRTR project also provide the Parties with baseline information necessary to identify suspect data; validate the information collected; and improve the overall quality of the data. Capacity building is especially relevant for Mexico's RETC program, which became mandatory only in 2004. Current challenges include a 30 percent increase in reporting facilities between 2004 and 2005, with a correspondingly steep learning curve for Mexican administrators and the facilities required to report.

The following capacity-building initiatives will promote increased comparability and consistency in the areas of data reporting, collection and quality assurance:

- Support for Mexico's efforts to improve efficiencies in the flow of PRTR data from Mexican states to the federal government; and identification and communication of data "outliers," through data compilation and analysis in the *Taking Stock* report.
- Exchanging information among PRTR officials on current data quality and industrial sector characterization efforts undertaken by the Canadian and US PRTR programs. This will result in improvements to the individual PRTR programs and promote increased comparability of PRTR data across North America. The NAPRTR Project's compilation, comparison and analysis of releases and transfers from certain sectors (e.g., steel and iron; cement; electricity) complements and provides additional information to national efforts in this regard.

Trade and Environment

The information developed through this project provides base level information to assess the environmental performance of certain industrial sectors and the implementation of pollution prevention efforts resulting in

cost reductions and increased competitiveness. Certain activities under the NAPRTR Project (e.g., examining releases and transfers from the electronics, electric generation, and other sectors) have synergies with the Trade and Environment program.

North American Scope of the Project and Its Relevance to the Three Parties

By virtue of its North America-wide scope, the NAPRTR Project allows for comparisons of industrial pollution, particularly within industrial sectors common to the three countries. Through analyses of reported PRTR data from Canada, the United States and Mexico, governments, industry representatives, and citizens can better understand the sources and types of industrial pollution with potential impacts on the health and environment of North Americans. The analysis provided by *Taking Stock* also describes changes in the pattern and trends of releases and transfers of toxic chemicals over time, by media, sector and country. This understanding is the first step in the decision-making process.

CEC Niche and Value Added

The importance of this project stems from the fact that it adds value and relevance to the goals of the national PRTR efforts, and provides information and analysis beyond that available through individual PRTR programs. The North American analysis of pollutant releases and transfers over time, through the *Taking Stock* report, is a unique contribution to public understanding of pollution sources and a leading example of the fulfillment of the public's right-to-know concerning pollution management. Through published analyses and online mapping of reporting facilities across North America, it offers enhanced access to important information for all stakeholders, for use in addressing environmental issues of concern at local, regional, national, and trinational levels.

Tracking pollutant releases and transfers at the continental scale recognizes that pollution reduction efforts require collaboration across borders. This project also fosters communication and cooperation among the three Parties in working toward institutionalizing and improving their own PRTR programs. The creation of Mexico's RETC and its incorporation into the NAPRTR is one of the success stories associated with this project.

Through the publication of *Taking Stock* and other outreach efforts, the CEC helps to increase visibility of individual programs. The CEC's North American PRTR project's annual Consultative Group meeting also provides a forum for stakeholders across North America to obtain information and provide feedback on the uses of PRTR data, data quality, data presentation, and outreach. Moreover, Canadian, Mexican and US officials also participate in this annual meeting, providing updates and information about their individual programs, while at the same time benefitting from stakeholder feedback within a regional context.

Linkages with Other CEC Projects

The NAPRTR Project has linkages with the CEC's Sound Management of Chemicals (SMOC) Program. Certain chemicals, or groups of chemicals (such as PBTs and mercury), are of concern and targeted for prioritization under both initiatives.

Similarly, there are inherent synergies between the NAPRTR project and the Enhancing Air Quality in North America efforts. For example, PRTR data from coal- and oil-fired power plants can be combined with other sources of information for use in specific air quality studies of this sector.

The data collected and analyzed under the NAPRTR project can provide information and potentially serve as indicators for the Trade and Environment project, "Assessment of the Linkages between Environmental Sustainability and Competitiveness in Selected Sectors for North America."

This project has linkages with the North American Environmental Atlas project, linkages which are being constantly developed through increased mapping of PRTR data used for a variety of analyses in the report and on the website.

Activities and Outputs

Key Activities

The specific activities or tasks that will be undertaken within the NAPRTR Project include the following:

- NAPRTR Officials working group: Organize regular conference calls with PRTR officials to review the progress of the project (including

relevant documents and deliverables), discuss and assess the project's needs, offer guidance and strategies for improvement, and assist in setting priorities.

- Capacity-building: Work with officials on developing and implementing ways to increase comparability and consistency in the areas of data reporting, collection, and quality assurance. Activities will include the exchange of information for the development of industry sector profiles; and promoting efficiencies and exchange of information about quality assurance and control mechanisms to promote improved data quality, particularly with respect to RETC state-federal data flows.
- Data Collection and Analysis: Collect information from the PRTRs and, where pertinent, other data repositories of the three Parties; address data inconsistencies and incorporate results of relevance and use to the Parties and stakeholders in the *Taking Stock* report. One goal is to provide the data in a format suitable for use in Web and mapping applications (e.g., in accordance with NAAF guidelines).
- Information Management Infrastructure: Explore innovative ways to improve the process of gathering, storing, and accessing the NAPRTR data in order to increase their usefulness in existing or future projects or applications (e.g., *Taking Stock Online*, Atlas Mapping, Trade and Environment projects, and ad-hoc reporting for CEC programs).
- Outreach: Organize the annual PRTR Consultative Group meeting, which provides feedback on *Taking Stock* and the NAPRTR project, and offers input into areas of focus and analysis for future reports; participate in national and international PRTR efforts; and increase outreach via enhanced access to the *Taking Stock Online* website and tools.

Target Groups

The NAPRTR Project's target groups include the universe of possible stakeholders, but more particularly, governments, nongovernmental organizations working on pollution issues, industry, academics involved in related studies, and the average citizen looking for information about local, national or continent-wide pollution sources.

Partners, Stakeholders

The US EPA (Toxics Release Inventory), Environment Canada (National Pollutant Release Inventory), and Mexico's Semarnat (RETC program) provide the information and data for this Project. Academics and industry experts also participate by reviewing the *Taking Stock* feature chapter.

Leveraging

Data from the three Parties are used for the compilation and production of reports and associated products of the NAPRTR project.

Outputs and Associated Timelines

Taking Stock 2006 report and *Taking Stock Online* (website and searchable database): May 2009

Anticipated Outcomes and Performance Indicators

Direct Outcomes:

The direct outcome of the NAPRTR Project is the creation of infrastructure that allows the three Parties to exchange information, reach a common vision, and work cooperatively in addressing issues related to the comparability, consistency and improvement of their respective PRTR programs.

Performance Indicators

- Reduced time lapse between data collection and final report distribution.

Intermediate Outcomes*:*

This infrastructure permits the Parties to build capacity and seek policy changes that ultimately make possible the integration, relevance, and usefulness of the PRTR databases across North America.

Performance Indicators

- Consistency in reporting requirements across PRTR programs, including reporting of priority pollutants, as recommended in the *Action Plan to* Enhance *the Comparability of Pollutant Release and Transfer Registers in North America*.

Final Outcomes:

The final outcome of this project is the creation of an integrated North American PRTR project that supports the compilation and dissemination of quality, unbiased and comparable information. The ultimate goal of this project is that the use of this information result in positive actions, such as informed policy decisions, industry evaluation of efficiency and environmental performance, cost-effective pollution prevention practices, and citizen awareness about hazardous substances released to the environment.

Performance Indicators

- Level of information use in decision-making by stakeholders.

Timetable, Project Completion and Sustainability Beyond

The NAPRTR project expects to achieve some major goals in the next couple of years, particularly in relation to:

- streamlining PRTR data collection, compilation and exchange processes for the three countries.
- increased automation of many elements of the online searchable PRTR database.
- standardization of those elements of *Taking Stock* that are regular features of the annual publication.

The sustainability of this project is possible due to its ability to demonstrate the relevance and usefulness of the information it provides, the success in the institutionalization of the RETC, the establishment of innovative ways to exchange information, and the continuing cooperation of the PRTR officials. With a solid infrastructure in place, the project costs and related CEC workload can be significantly reduced. However, given the trinational scope of the project, the coordinating role of the CEC will need to continue. The work envisioned over the next two to three years should focus on:

- Continuing the effort to increase the comparability and consistency of the PRTR data. This may include the use of supplemental information collected by the Parties outside their PRTR programs.
- Expediting the data collection and analysis process to provide timely information.
- Improving the *Taking Stock* report, in terms of adding context, and user-friendliness of outreach products to increase relevance and usefulness of the information for the Parties and stakeholders.
- Developing performance measures to gauge the effectiveness of the project.

Culminating Steps in Achievement of Program Objectives

- Mandatory RETC in Mexico.
- Integrated PRTR database for North America.

Target End Date for CEC Involvement

Due to the tri-national nature of the project and coordinating role of the organization, it is anticipated that the CEC will continue to be involved, but that the level of effort will decrease over the years.

Sustainability Beyond

With the establishment of Mexico's mandatory RETC and recent public access to RETC data, ongoing CEC-Party collaboration focuses on data quality and promoting efficiencies in the state-federal exchange of information. Over the next few years, work will continue in these areas and the three Parties will have gained experience working together. This collaboration on increased efficiencies and data quality, along with improvements in terms of the scope and analyses of data in the *Taking Stock* report, will lend more weight to the specific actions recommended in the *Action Plan to Enhance the Comparability of PRTRs in North America* – including the promotion of additional industry sectors and priority chemicals for PRTR reporting.

The CEC can catalyze further action on the part of the Parties via regular communications and collaboration on the specific areas mentioned above. Analyses of data in *Taking Stock* are also catalysts for further action because they point out areas where further action is needed (e.g., significant differences in chemical or sector reporting). Through the annual NAPRTR Consultative Group meetings, stakeholders have the opportunity to provide feedback on the content and presentation of information and data in the

Taking Stock report and website. In addition, the three government PRTR officials and other stakeholders exchange information about the national PRTR programs and establish sustainable linkages.

Communications

The target audiences for NAPRTR products and information are governments, non-governmental organizations working on pollution issues, industry, academics involved in related studies, and the average citizen looking for information about local, national or continent-wide pollution sources. Communication occurs through the CEC *Taking Stock Online* web pages and searchable database, through the *Taking Stock* report, and at the annual NAPRTR Consultative Group meeting, where all stakeholders can have input in the CEC's NAPRTR Project process.

Information Management

Improved, integrated PRTR database: Data collection will initially be manual, but with greatly expanded ease of integration—in the future, possibly automated data collection. Users will have access to all reported data, as well as data subsets used for specific *Taking Stock* analyses.

A consultant has been charged with verifying, developing and documenting the integrated database for future use and maintenance by CEC staff. This contract includes the development of data outputs, such as maps and graphics, to enhance access and understanding by users. The improved database will enable better data access by users and, through standardization of certain elements (e.g., geographic coordinates conforming to the North American Atlas Framework), access for purposes of other CEC programs.

Distribution: General
C/OP09/Draft3/PROJ13
ORIGINAL: ENGLISH

Project 13	**Conserving Marine Species and Spaces of Common Concern**	**Responsible Project Manager at the CEC Secretariat**	Hans Herrmann
Planned Allocation	2009: C$351,000 Completion of 2008 Outputs: C$32,000 Total: C$383,000	**Working Group(s) associated with this work**	Biodiversity Conservation Working Group

Objective of Project

The purpose of this project is to assist the Parties in fulfilling their commitment to better conserve, protect and enhance the North American environment,[1] specifically by implementing pilot projects that effectively demonstrate the benefits of trinational collaboration, and that can be replicated in other regions.[2]

With the completion of the first five years of the 15-year biodiversity strategic plan, many of the CEC's species and spaces projects will be phasing out in 2009—providing an opportunity either to conclude these initiatives or to foster their continuation in other venues.

Background

Project History and Foundation

The Plan for North American Cooperation for the Conservation of Biodiversity (the Biodiversity Strategy) was endorsed by the CEC Council in 2003. Holistic in design, the Biodiversity Strategy is intended to steward trinational efforts to conserve species and spaces and deal with common threats by strengthening local capacity, and using economic and market instruments in regions of ecological significance and conservation sites, like the Baja California to Bering (B2B) marine ecological region.

The B2B initiative and the related marine North American Conservation Action Plans (NACAPs) have demonstrated pilot implementation of the Biodiversity Strategy and a framework for cooperation. The year 2008 marks the completion of the strategy's first five-year cycle. Accordingly, and as prescribed in the strategy, 2008 also marks its first comprehensive review. It is expected that this review will form the basis for adjustment and renewal of the ongoing strategy.

Important milestones:

- June 1997—*Ecological Regions of North America: Toward a Common Perspective* was published.
- October 1999—17 terrestrial species were chosen as species of common conservation concern.
- July 2002—16 marine species of common conservation concern agreed upon by the three countries.
- April 2003—priority conservation areas (PCAs) were identified for the B2B region.

[1] Under the North American Agreement on Environmental Cooperation (NAAEC)
[2] Resolution 08-05: *The CEC Council will: "Consider expanding the strategic approach of the NAMPAN to embrace the Atlantic, the Gulf of Mexico and Caribbean, and the Arctic coasts of North America."*

- June 2003—Council adopted the Strategic Plan for North American Cooperation in the Conservation of Biodiversity.[3]
- June 2004—6 marine and terrestrial species were selected for NACAP implementation.
- April 2005—implementation of a network of monitoring sister sites in the B2B region began.
- 2005–2007—establishment of the B2B scorecards, a common framework to assess the ecological conditions of and understand the underlying pressures on biodiversity in selected marine protected areas (MPAs) throughout the B2B region.
- 2007–2008 —the CEC implemented several training workshops for fishermen in support of Mexico's decentralization initiative.
- May 2008—the Biodiversity Conservation Working Group (BCWG) endorsed the current project and recommended that the continuation of work on NAMPAN and the NACAPs in 2009.
- June 2008—CEC Council decided to consider expanding the NAMPAN strategic approach into other shared ocean ecosystems (e.g., Atlantic, Arctic, Gulf of Mexico).[4]

Key Stakeholders, Resource Leveraging, Partnerships

Implementation of this project will continue to be in partnership with government agencies:

Tasks 1-4: National Oceanic and Atmospheric Administration (NOAA, National Marine Sanctuaries, Estuarine Reserves, Fisheries), Interior (National Park Service, Fish and Wildlife Service) Fisheries and Oceans Canada (DFO), Environment Canada (EC), Parks Canada, the *Comisión Nacional de Áreas Naturales Protegidas* (Conanp), Inapesca.

Task 5: NOAA (National Marine Sanctuaries, Estuarine Reserves, Fisheries), Interior (National Park Service, Fish and Wildlife Service) Fisheries and Oceans Canada (DFO), Environment Canada (EC), Parks Canada, the *Comisión Nacional de Áreas Naturales Protegidas* (Conanp), Inapesca, including region's NGOs, research centers, universities and local environmental agencies.

Task 6: NOAA-NMFS, DFO, CONANP, and fishing communities.[5]

Task 7: SPLASH partnership (*Government*. agencies contributing 90% of resources).

Task 8: OIKONOS in kind services (salaries and website), and NOAA, contributing 50 percent of resources), in-kind services from Canada's PFSW recovery team.

Advisory Groups Related to this Project

Biodiversity Conservation Working Group (BCWG); NAMPAN steering committee; and the NACAP ad hoc technical and scientific teams.

Rationale

This project has assisted the Parties in strengthening their continental capacities and knowledge baseline to conserve priority species and habitats in a region of high ecological significance[6] in North America.

It has done so, through:

- assisting the Parties in identifying, assessing and addressing the underlying causes of decline of three marine species of common conservation concern;
- helping fill capacity gaps required for monitoring species and habitats of common interest;
- supporting the establishment of a functional network of MPAs, to assess and monitor the ecological integrity of key marine spaces; and,

[3] http://www.cec.org/files/PDF/ABOUTUS/Res-07-Biodiversity_en.pdf
[4] Council Resolution 08-05 http://www.cec.org/files/PDF/ABOUTUS/08-05RES_en.pdf

[5] Fishing communities to partner in the training workshops, will depend upon the results of the characterization of index beaches
[6] See: http://cec.org/programs_projects/conserv_biodiv/priority_regions/index.cfm?varlan=english>.

- promoting the project experience as a replicable model valid for application to other ecological significant regions in North America (monarch sister sites network, grasslands, etc.)

Fulfillment of Strategic Objectives

This project is linked to the fulfilment of the 2005–2010 Strategic Plan through the following[7]:

- Strengthening capacity, establishing a framework, and filling information gaps, in order for decision-makers to understand the underlying pressures on key habitats and priority species, and ways to promote sustainable development activities for a region of shared interest, as it has been achieved by the B2B scorecard framework (**Objective 7**).
- Training activities, as outlined in the NACAPs, that promote species conservation, by addressing underlying stressors (incidental bycatch and vessel collisions), and the scoping of potential market approaches to support protection, conservation, and sustainable local economies (**Objective 6**).
- Scoping of potential market approaches to support marine conservation and sustainable local economies, through (among others) the development of sustainable biodiversity business opportunities which incorporate marine conservation goals (**Objective 10**).
- The sharing of scientific information and expertise to support and increase knowledge of key habitats and priority species, sustainable activities, and the prevention and reduction of destructive practices (**Objective 4**).

One of the most comprehensive projects of NAMPAN to date has been the establishment of the NAMPAN Condition Assessment Scorecard, which distils large amounts of complex technical and traditional/local ecological knowledge about MPA conditions for the west coast (B2B) of North America.

[7] Refer to CEC's Strategic Plan objectives

This year 2009 represents the culmination of the B2B pilot and related marine NACAPs, under the auspices of the CEC, having achieved:

- a common environmental information baseline, based on a *pressure-state-response* model;
- an operational trinational network of experts and managers that will continue to address issues of concern;
- increased capacities of key stakeholders (fishermen, and tourist operators) to deal with the challenges of protecting endangered species while continuing their economic activities;
- a cadre of MPA managers that will steward a continental perspective in the management and monitoring of MPAs in the B2B region; and
- a common reporting approach (B2B scorecards) for MPAs, which can be replicated in other marine or terrestrial regions.

North American Scope of the Project and its Relevance to the Three Parties

This project is aimed at implementing pilot projects to conserve species and spaces of common concern that effectively demonstrate the benefits of trinational collaboration, and that can be replicated in other regions of ecological significance to North America.

In order to maintain the ecological integrity, protect migratory species, transboundary habitat and deal with common threats to marine ecoregions, a continental approach to marine conservation has been developed under the stewardship of the CEC. The North American Marine Protected Areas Network (NAMPAN) represents a trinational network of MPA managers and other relevant experts and is intended to enhance and strengthen the conservation of biodiversity in critical marine habitats and help foster a comprehensive network of MPAs in North America by the responsible agencies in the three countries.

The leatherback turtle, the humpback whale and the pink-footed shearwater are among the 33 North American Species of Common Conservation Concern (SCCC), because of the opportunity to address incidental bycatch in the three countries. The designation by the CEC of North American Species of Common Conservation Concern (SCCC) was determined by considering

and weighing various criteria, such as level of risk of extinction, common threats in the three countries, and the need for collaboration among Canada, Mexico, and the United States.

International cooperation among the three countries has played a major role in the recovery of marine mammals (such as gray whales) and, more recently, in dealing with incidental bycatch. With this in mind, the primary role of this project is to address the need and opportunity to enhance—through coordination—the effectiveness of measures undertaken to conserve this species of shared continental concern.

There is now widespread recognition of the need for an integrated, continental strategy to protect and maintain key habitat along the species' ranges, while addressing the root causes of habitat deterioration.

All of the tasks and activities outlined here pertaining to the leatherback turtle, the humpback whale, and the pink-footed shearwater are drawn from the respective North American Conservation Action Plans (as approved by the Parties) and are of trinational importance, and have been proposed by the trinational project task groups.

CEC Niche and Value Added

During the last three years, the CEC has acquired considerable experience in training fishermen on disentanglement and on the use of new fishing gears. Assessments done by Conanp and Inapesca officials suggest that the adoption of new gears and disentanglement techniques in those communities targeted by the 2005–2008 pilots is increasing.

The CEC's catalytic role and value added contribution to this work is founded on the need to develop complementary conservation approaches for species and habitats of common trinational concern on shared marine ecoregions, which are replicable across a variety of national contexts and provide a level playing field among stakeholders. The CEC is uniquely placed to lead this work, given its trinational scope and mandate to "conserve, protect and enhance the environment, including wild flora and fauna" (NAAEC 1993).

Linkages with Other CEC projects

- Habitat conservation (linkage to the Upper Gulf of California Biosphere Reserve, which is a member of the B2B NAMPAN network) and sustainable fishing practices: *Recovering the vaquita and promoting sustainable livelihoods.*
- If Marine Biome selected is B2B: *Protecting priority conservation areas from alien invasive species.*
- MPA maps: *Mapping North American Environmental Issues.*

Activities and Outputs

Key Activities

- Continued implementation of the shared trilateral monitoring program for marine protected areas situated along the Pacific coast (Information for decision-making).
- Support for the above implementation with training of practitioners on the use and implementation of the scorecard reporting process for a new set of MPAs in the B2B region (Capacity building).
- Identification and description of priority conservation areas in the newly selected marine region(s)[8] (Information for decision-making: agencies and regional NGOs of the protected areas).
- Following the fisheries characterization that will be completed in 2008, develop and implement activities that will build capacity of regional stakeholders to reduce bycatch (Capacity building: local fishers).
- Support for the SPLASH[9] symposium that will develop long term strategy for tri-national humpback work, building on past CEC

[8] CEC Council Resolution 08-05 calls for an expansion of NAMPAN into other shared oceanic ecosystems (e.g., Atlantic, Arctic). At the December meeting, the NAMPAN ad hoc group will propose to the BCWG the new marine region(s) to focus future NAMPAN work.
[9] SPLASH (Structure of Populations, Levels of Abundance and Status of Humpbacks) represents one of the largest international collaborative studies of any whale population ever conducted. It was designed to determine the abundance, trends, movements, and population

initiatives, including support for scientists from Canada, Mexico and the United states. (Capacity building: scientists and governmental experts).

- Training in survey methodologies to estimate seabird abundance and distribution in Mexico, including retrospective analyses of satellite and at-sea survey data (2005–2008) for the pink-footed shearwater (Capacity building: scientists and governmental experts).
- Continuing support of the sharing of information and expertise concerning preventing and managing human impacts (incidental bycatch, entanglement, etc.) on NACAP species (Information for decision-making: fisheries authorities and fishers).
- Development of a five-year action plan to support the second phase of the Biodiversity Strategy (Information for decision-making: CEC Council of Ministers).

Target Groups

MPA managers, fishing communities, local fishery authorities.

Partners, Stakeholders

Implementation of this project will continue to be in partnership with government agencies, i.e., NOAA (Marine Sanctuaries, Estuarine Reserves, Fisheries), Interior (National Park Service, Fish and Wildlife Service) Fisheries and Oceans Canada (DFO), Environment Canada (EC), Parks Canada, the *Comisión Nacional de Áreas Naturales Protegidas* (Conanp), Inapesca and various NGOs.

Leveraging

The following resources are to be used for the MPA training workshops in the B2B region:

- NOAA: US$11,000
- Parks Canada: US$15,000[10]

Outputs and Associated Timelines

Associated outputs/products include the following:

- A new set of MPAs[11] implementing the B2B scorecard approach;
- Report on the Priority Conservation Areas (PCAs) of the newly selected marine region (e.g., Atlantic and South Florida/Maya Reef or the Arctic;
- Incorporation of NAMPAN's clearinghouse and online database into CEC and partner websites (Parks Canada, NOAA, and Conanp). The clearinghouse is a distributed system that allows visualization and analysis of North American monitoring data collected at sister sites, including, whenever possible, NACAP species; and
- New data layers for inclusion in the CEC's North American Environmental Atlas.

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- A common continental approach on environmental monitoring and reporting on spaces of common interest.
- A new marine region (Atlantic and South Florida/Maya Reef or the Arctic) and PCAs on which to focus trilateral collaboration.
- Training of fishers to ensure a measurable reduction of bycatch in 4 index beaches of the Mexican Pacific (Mexiquillo, Tierra Colorada, Cahuitán, and Barra de la Cruz)
- Proceedings of the SPLASH Symposium, including recommendations to wildlife and fisheries agencies in Canada, the United States and Mexico, based on a collective scientific

structure of humpback whales throughout the North Pacific and to examine human impacts on this population. SPLASH is an initiative supported by a number of agencies and organizations, including the National Marine Fisheries Service, the National Marine Sanctuary Program, National Fish and Wildlife Foundation, Pacific Life Foundation, Department of Fisheries and Oceans Canada, and the Commission for Environmental Cooperation.

[10] Funds from Parks Canada may be used to support the B2B condition report

[11] In 2008, the NAMPAN ad hoc group identified a trinational set of the remaining (and willing) MPAs in the B2B, which will have their staff trained on the scorecard methodology.

assessment of the results of population status, the genetic structure of populations, habitat conditions, and human impacts analyzed from 2004–2008

- Support for the Canadian Recovery Strategy for the pink-footed shearwater that calls for the identification of marine habitats of importance; to promote, support and augment international initiatives contributing to the recovery throughout their range; and to develop and implement educational activities; and address knowledge gaps concerning threats to the bird.

Intermediate Outcomes

- Increased awareness and understanding of the condition of marine biodiversity and the underlying pressures it faces in the B2B.
- Implementation and adoption of strategies to address pressures to NACAP species (in particular, the negative effects of bycatch).

Final Outcomes

- A permanent, MPA-based monitoring system for the B2B region.
- Adoption by fishermen and local and state governments of effective strategies and programs to eliminate bycatch.
- Effective incentives for local fishermen in Mexico to reduce the use of unsustainable fishing gear.
- Increased capacity for local Mexican fisheries stakeholders to implement actions to reduce bycatch
- Greater policy coherence in and increased effectiveness of bycatch programs.
- Improved understanding of each of the NACAP species' migratory patterns and habitat usage, and the impact of human activities thereon, including recommendations for conservation and management policies.
- Increased trinational collaboration and outreach to protect NACAP species in the B2B region.

Performance Indicators

- Number of MPAs in the B2B adopting the NAMPAN monitoring system (a suite of biophysical and socio-economic indicators) or adapting it to meet their own requirements.
- Number of MPA staff (including species experts) trained in the scorecard methodology.
- Frequency with which the sister MPAs (beyond the existing 10) in the B2B report use the NAMPAN monitoring system indicators and protocols.
- Completion of the first report on the environmental state of marine habitats and NACAP species in the B2B.
- Increased usage of B2B website, measured by number of visitors, location and time spent on website; scientific and public referrals and citations; who is linking to specific pages on the site and the frequency of use by MPA managers and other government agencies.
- Development of conservation strategies for sea turtles based on the characterization initiative.
- Planning and completion of at-sea seabird survey methods workshop.
- Number of observers trained in survey methods.
- Number of days seabird surveys are conducted in focus region.

Timetable, Project Completion and Sustainability Beyond

- The 2008 review of current biodiversity strategic plan.
- CEC's strategic planning process (for its 2010–2015 Strategy) will guide and direct the any further implementation of biodiversity-related initiatives.

Culminating Steps in Achievement of Program Objectives

- In 2009, NAMPAN will begin its transition from the B2B to another region of high continental significance, as directed by Council.
- Staff from participating MPAs from B2B have been identified and will champion the continuation and periodic reporting on the conservation conditions of the B2B region. A training course on the scorecard methodology will engage the remaining clusters of MPAs. Arrangements for continued maintenance and sustained financing will be made with partner agencies in 2009.

Target End Date for CEC Involvement

2009[12]

Sustainability Beyond

Beyond the collaborative achievements described above, the continued implementation and replication of the initiative will have to be addressed by each Party, according to individual priorities and socio-economic realities.

In 2008, the BCWG—with the support of CEC's Secretariat—is reviewing the progress and outcomes of all initiatives carried out under this and other biodiversity-related projects during the previous 10 years. This assessment will support the deliberation of the CEC Council on emerging biodiversity issues, as well as on other ecologically significant regions and species on which cooperative work might be focused under the auspices of the CEC.

Communications

The main target audiences of this project are: government agencies (Conanp, Parks Canada and NOAA-MPA Center), fisheries authorities and other state/provincial and local wildlife authorities, local fishing communities, scientists, and NGOs.[13] In keeping with the overall goal of improving information for decision-makers and stakeholders at all levels, the products generated in this project will be made publically availably through electronic and printed means—once these products have been approved by the quality assurance process, where required.

Information Management

B2B website, which will act as a knowledge base for species and spaces of common concern in the B2B: This site will feature an application to collect, visualize, and analyze monitoring data from species (NACAPs) and spaces (MPAs) in the B2B.

[12] In 2009, except as supported by a Council-approved Biodiversity Conservation Strategic Plan for 2010–2015.
[13] Identity of participating NGOs will depend upon the region(s) selected for NAMPAN future implementation.

Distribution: General
C/OP09/Draft3/PROJ14
ORIGINAL: ENGLISH

Project 14	**Conserving the Monarch Butterfly and Promoting Sustainable Livelihoods**	**Responsible Project Manager at the CEC Secretariat**	Thomas Hammond
Planned Allocation	2009: C$130,000 Completion of 2008 Outputs: C$20,000 Total: C$150,000	**Working Group(s) associated with this work**	Biodiversity Conservation Working Group (BCWG)

Objective of Project

The objective of this project is to support and facilitate ongoing implementation of the North American Monarch Conservation Plan (NAMCP)[1]. The fundamental goal of the NAMCP is to maintain healthy monarch populations and intact habitats throughout the migration flyway in North America. This effort is supported by a trilateral monarch butterfly protected-area network, monitoring efforts along the flyway in Mexico, the United States, and Canada, and where possible sustainable development activities that support the use of market forces to promote conservation of over-wintering and flyway habitat, supporting improved livelihoods in conjunction with local communities.

Background

Project History and Foundation

The development of the North American Monarch Conservation Plan was initiated in December 2006 at the Monarch Flyway Conservation Workshop in Mission, Texas, and further developed at the March 2007 *Foro Regional Mariposa Monarca* in Morelia, Mexico. This initiative—endorsed by the Trilateral Committee for Wildlife and Ecosystem Conservation and Management in 2007—is focused on conservation of the monarch butterfly and its migratory phenomenon throughout the trinational flyway.

Following CEC's Council Resolution 07-09[2] directing support to the existing multi-stakeholder collaborative effort to develop a North American Monarch Conservation Plan, the CEC hosted a trinational workshop and obtained input from an extensive list of experts from diverse backgrounds. In June 2008, the NAMCP was completed and delivered to Council.

This plan provides an updated account of the species and its current situation, identifies the main risk factors affecting it and its habitat throughout the flyway, and summarizes the current conservation actions taken in each country. It offers a list of key trinational collaborative conservation actions, priorities and targets to be considered for implementation by the three countries. Moreover, the NAMCP provides an agreed comprehensive framework for leveraging and coordinating the diverse conservation actions taking place across all three countries of the flyway beyond the completion of this project in 2009.

The activities described here build on the Council resolution and delivery and completion of activities undertaken or currently underway in 2008, specifically:

- The completion of the North American Monarch Conservation Plan, and in particular the Table of Specific Actions contained within the Plan;
- Delivery of the socio-economic study examining root causes of habitat pressure throughout the Monarch flyway (final draft expected late Oct. 2008);

[1] North American Monarch Conservation Plan

[2] Council Resolution 07-09

- Training workshop to support ongoing Monarch monitoring efforts, and improve exchanges of monitoring data and information trinationally;
- Scoping community-based activities in the Mexican overwintering sites where sustainable economic approaches could assist in improving sustainable livelihoods while at the same time supporting conservation goals.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

Key stakeholders in the implementation of this project include:

- Government agencies: Comisión Nacional de Áreas Naturales Protegidas (CONANP), US-FWS and CWS;
- Local and state/provincial authorities
- Reserva de la Mariposa Monarca—World Heritage Site, including local communities in the region of the over-wintering sites;
- Trilateral Committee for Wildlife and Ecosystem Conservation and Management;
- Foro Regional Mariposa Monarca;
- Local and regional conservation groups; and
- Scientists, schools and citizen conservation groups in all three countries.

Rationale

The monarch butterfly (*Danaus plexippus*), along with its migratory pattern unparalleled in nature, is an iconic species with considerable trinational significance—emblematic of the interdependence of North American ecosystems. The exceptional monarch migration phenomenon has attracted significant conservation effort and scientific attention, and was inscribed in 1983 on the IUCN Red List of Endangered Species. In July 2008, the UNESCO World Heritage Committee recognized the montane protected areas in Mexico, comprising the over-wintering sites of the monarch butterfly, as a World Heritage Site for precisely the same reasons—joining a distinctive list of 174 natural sites around the world of outstanding universal value.

Today, the migration phenomenon of the monarch butterfly is threatened by destruction, degradation, and fragmentation of breeding and migration habitat in Canada, the United States, and Mexico due to land conversion, herbicides, pesticides, and exotic plant invasion, and to deforestation of wintering habitat in Mexico. There is an urgent need for additional ecological and socio-economic information to better protect the monarch butterfly and its habitats, while supporting local socio-economic development.

Fulfillment of Strategic Objectives

Efforts in 2009 are designed to support ongoing implementation of the NAMCP through support to trinational monitoring efforts, and addressing the socio-economic imperatives driving habitat degradation in the over-wintering areas as priorities. Concomitantly, this project supports culmination of the CEC's ongoing efforts in this project and fulfillment of the CEC's 2005–2010 Strategic Plan through:

Capacity Building

- Supporting coordination and building capacity among local, national and international agencies and NGOs involved in the conservation of monarch butterfly habitat and its migratory phenomenon (Objective 7);
- Training and developing capacities at local and regional levels to assess the status of the monarch population, its habitat, and the environmental stressors, based upon long-term trinational monitoring and assessment protocols (Objective 7);

Information for Decision Making

- Addressing information gaps in the understanding of North American decision-makers (particularly Conanp, USFWS, and CWS) regarding the underlying pressures on the monarch and its habitat throughout the entire flyway, and of the means to address them (Objective 2); and

Trade and Environment

- Promoting market-based activities that will reduce pressure on key monarch habitat, particularly in over-wintering areas, while at the same time improving livelihoods in local communities in the vicinity of these sites (Objective 9).

North American Scope of the Project and its Relevance to the Three Parties

As noted above, the monarch butterfly is an iconic migratory species of unique trinational significance. All project tasks and activities outlined here are drawn from the North American Monarch Conservation Plan (as approved by the Parties) and are of unique trinational importance, as proposed by the trinational project task group.

Conserving the monarch over-wintering sites in Mexico, as well as working to improve foraging/breeding success along the entire length of the flyway, is of critical importance to maintaining viable monarch populations in North America. This project will support ongoing tri-lateral collaboration towards improving monarch monitoring efforts, sharing of data from these efforts, and contributing towards critical habitat conservation in the Mexican over-wintering sites.

Since the initiation of Monarch Butterfly conservation activities within the CEC in 1996, interest in conservation, education, and monitoring efforts has grown rapidly in North America—particularly among nongovernmental organizations and academia. There is now widespread recognition of the need for an integrated, continental strategy to protect and maintain key habitat along the monarch's flyway, while addressing the root causes of habitat deterioration.

CEC Niche and Value Added

The CEC's role in this project over the long term is to build consensus around a shared conservation strategy for the monarch butterfly (i.e. the North American Monarch Conservation Plan) and assist in implementing those aspects of the plan that specifically benefit from coordinated, trinational effort. The trinational task group for this project has identified standardized monarch monitoring efforts across North America, sharing of data from these efforts, and trinational collaboration towards critical habitat conservation in the Mexican over-wintering sites as the key areas for cooperation.

Linkages with Other CEC Projects

This project, particularly task 2, is linked to the work being undertaken in the Harnessing Market Forces (Conserving Biodiversity Through Trade) project 5C – insofar as results from this task may be used as a case study example.

Activities and Outputs

Key Activities

Based on the priority actions identified in the North American Monarch Conservation Plan (NAMCP[3]), key activities and outputs for 2009: as proposed below. Note: a final decision on these tasks will be taken in early 2009 once results from the socio-economic survey, the Foro Regional Mariposa Monarca, and other inputs have been assessed.

- Analysis completed of existing (and past) projects in the area of the overwintering reserves which demonstrate success in linking sustainable development and livelihoods improvements to biodiversity conservation;
- Sub-set of existing projects selected from the above analysis for further investment;
- Ongoing training in standardized monarch monitoring techniques undertaken, following from the results of the October 2008 monitoring training workshop;
- Needs assessment and system requirements analysis conducted—to support a collaborative, online approach to sharing and integrating monarch monitoring data within North America.

Target Groups

Principle target groups for the 2009 tasks are federal and state/provincial governments, NGOs, and academic organizations involved in monarch butterfly monitoring initiatives, as well as community based organizations involved in habitat conservation and socio-economic activities around key protected areas along the North American flyway.

Partners, Stakeholders

Project stakeholders include the *Comisión Nacional de Áreas Naturales Protegidas* (Conanp), the US Fish and Wildlife Service, the Canadian Wildlife Service (i.e., the CEC Project Task Group), along with relevant

[3] As instructed by Council's Resolution 07-09, the Secretariat coordinated stakeholder and expert meetings in December 2007 to facilitate the development of the North American Monarch Conservation Plan. A wide array of experts, government agencies, NGOs and local and federal authorities participated in its development.

state/provincial authorities. Also included are local/regional community groups and conservation organizations, as well as academia and citizen science groups in all three countries. The later are primarily involved in scientific, monitoring and data collection efforts, as well as in habitat conservation activities.

Leveraging

All proposed 2009 activities are designed to build on existing trinational networks and initiatives in monarch conservation – whether in ongoing monitoring efforts across all three countries or in linking directly with community-based projects designed to link conservation of key protected areas to sustainable development. In this way, implementation of 2009 activities leverages (and is leveraged by) ongoing activities, and will contribute to overall sustainability of outcomes.

Outputs and Associated Timelines

The table below provides detail on the specific tasks, outputs, and timelines for this project in 2009.

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Increased knowledge of the socio-economic drivers affecting habitat of importance for the monarch butterfly and market-based opportunities which benefit conservation and economic development.
- Consensus developed among key stakeholders regarding the most viable existing socio-economic activities which can support both species/habitat conservation goals and improved sustainable livelihoods.
- Support for targeted monarch monitoring training activities, as identified in the Trinational Monarch Butterfly Monitoring Workshop - October 2008.
- Increased participation of local communities in promoting local economic (sustainable development) initiatives which support conservation of critical Monarch habitat.
- Improved understanding of needs and requirements to support collaborative sharing and integration of monarch monitoring data.

Performance Indicators

- Identification of projects/activities which best support the objectives and planned actions of the NAMCP.
- Adoption of a North American monitoring framework and “toolkit” by monarch sister sites, NGOs, citizen conservation groups and local communities.

Intermediate Outcomes

- Improved trinational collaboration on the assessment and continuous monitoring of the species, its habitat, and its stressors, throughout the flyway.
- Improved understanding among parties and other stakeholders re best practices supporting sustainable economic activities which promote both habitat conservation and improved livelihoods, including improved local understanding and involvement to take advantage of existing trade mechanisms in North

Performance Indicators

- Number of protected areas and monarch conservation organizations in North America adopting the NAMCP to guide their conservation actions.
- Success of trinational monitoring efforts in improving overall understanding the status of monarch populations and the migration pattern.
- Ongoing success of sustainable development projects.

Final Outcomes

- Adoption of effective trinational strategies and programs to address monarch habitat loss and degradation.
- Healthy monarch populations and conserved habitats throughout the North American migration flyway.

Performance Indicators

- Tracking of land use/land cover changes over time in key monarch migration and overwintering habitat.

- Monitoring results of monarch butterfly populations along the flyway.

Timetable, Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

The action plan of the NAMCP represents a long term conservation undertaking across all three countries in North America. Through "trainer of trainers" in monarch monitoring techniques and in working with community based organizations in developing business plans for sustainable, monarch-friendly enterprises during the final year of implementation, however, project results will provide support for ongoing trilateral implementation of the action plan.

Target End Date for CEC Involvement

The year 2009 represents the conclusion of CEC coordinated activities in support of the North American Monarch Conservation Plan (NAMCP). Any future CEC coordinated work in this area may result from priority setting during the 2010–2015 strategic planning cycle.

Sustainability Beyond

The activities outlined here are designed to build on achievements of the Conserving the Monarch Butterfly Project over the past four years. Canada, the United States, and Mexico are already investing in a variety of monarch conservation initiatives across the flyway. It is expected that the lessons learned by the implementation of the NAMCP will allow the Parties and other relevant stakeholders to continue working together and using the NAMCP as a framework for targeted collaborative actions for the conservation of this species within North America.

In addition, the accumulated achievements of this project will both contribute to and inform the development of the next five year strategy of the CEC and the Biodiversity Conservation Program—providing guidance for focusing continued Secretariat action in this area (if required) which effectively leverages the unique niche and value added of the CEC.

Communications

The main target audiences of this project are: key government agencies (federal and state/provincial) involved in protected area and wildlife management, local communities, scientists, citizen conservation groups, and the interested public.

Information Management

All outputs planned for 2009 relate to building capacity with key project stakeholders. No print or electronic outputs designed for broad public consumption are planned for this implementation period.

Distribution: General
C/OP09/Draft3/PROJ15
ORIGINAL: ENGLISH

Project 15	**Protecting Priority Conservation Areas from Invasive Alien Species**	**Responsible Project Manager at the CEC Secretariat**	Thomas Hammond
Planned Allocation	C$125,000	**Working Group(s) associated with this work**	Biodiversity Conservation Working Group (BCWG)

Objective of Project

The objective of this project is to contribute to the protection of Priority Conservation Regions (PCRs)[1] in North America from the harmful effects of invasive alien species (IAS).

The project will take stock of current work on IAS risk assessment with a view to identifing new areas of trinational cooperation, specifically with respect to early warning and prevention of invasive species associated with trade and economic process in North America. In addition, the project will assist in establishing a framework of potential future trinational engagement on this issue to inform development of the 2010–2015 CEC Strategic Plan.

Implementation of the 2009 project activities described here will draw to a close the CEC's efforts with regard to alien invasive species under the current Biodiversity Strategy. A reassessment of the CEC's strategic plan will begin in early 2009, and any future work on IAS will be drawn from this priority setting exercise.

Background

Project History and Foundation

Canada, Mexico and the United States have a long history of regulatory and non-regulatory action to address invasive alien species within the CEC work program. In 2001, the CEC convened a North American workshop to identify opportunities for trilateral cooperation.[2] In 2003, the Biodiversity Program in partnership with the CEC's Joint Public Advisory Committee (JPAC) organized a public meeting to further define issues of priority: "*An Unwelcome Dimension of Trade: The Impact of Invasive Species in North America.*"[3]

Based on earlier results and recommendations of JPAC, in 2004 the CEC developed a directory of projects, institutions and experts working on aquatic IAS in Canada, Mexico and the United States. In 2005, the CEC partnered with the *Comisión Nacional para el Conocimiento y Uso de la Biodiversidad* (Conabio) to develop the Mexican Information System on Aquatic Invasive Species. The resultant database includes taxonomic information, geographic distributions, and other scientific information. In 2005 the CEC developed a resource guide aimed at providing the governments and other stakeholders with background information to understanding the causes and consequences (as well as status and trends) of biological invasion in North America's aquatic and marine systems. These achievements have contributed directly to the development of domestic IAS management strategies in North America.

Other milestones of recent CEC engagement include:

- In 2005 the CEC identified two groups of fishes within the aquarium trade pathway to develop the Risk Analysis Guidelines for field-testing under the CEC. This work builds upon the United States' Aquatic Nuisance Species Task Force Generic Non-indigenous Aquatic Organisms Risk Analysis Review Process. The two groups

[1] Strategic Plan for North American Cooperation in the Conservation of Biodiversity http://www.cec.org/pubs_docs/documents/index.cfm?varlan=english&ID=1088

[2] http://www.cec.org/files/PDF/BIODIVERSITY/aquatic-invasives_en.pdf

[3] http://www.cec.org/files/pdf/JPAC/SR-Invasive-Species-4-Dec-2003_en.pdf

selected were: Snakeheads (*Channidae*) and Plecostomus (suckermouth catfishes).

- In 2006, the CEC supported the creation of a database on Canadian imports of freshwater live-fish as part of its efforts to raise the capacity of its country members to gather, systematize, and analyze information on aquatic IAS.
- In 2007, the CEC undertook two test case study risk assessments for the Snakehead and Plecostomus. These risk assessment guidelines, currently in print, are applicable to aquatic and terrestrial pathways of introduction of high-risk species and meet the NAFTA requirements for risk assessment (Chapter 7, Section B: Sanitary and Phytosanitary Measures).
- In that year the CEC undertook a socio-economic study on the impact of invasive species, particularly Plecostomus, in the Infiernillo Dam (Mexico) along with a Loricariid taxonomic analysis. This work, currently in print, directly addressed two key CEC priorities—specifically, improved availability of information and increased capability to prevent and control freshwater aquatic invasive species.
- Also in 2007, the CEC supported the strengthening of the Mexican IAS system, and contracted NatureServe to assess the interoperability of information systems, and develop a prototype that could be used on priority areas.
- In 2008, CEC identified a cluster of "hotspots", areas of high ecological value, where the ecological integrity may be at risk from biological invasions.
- Much of the anticipated 2008 project work will not be accomplished by the end of this year due to delays in establishing a project advisory group to guide implementation. These tasks have been carried forward to 2009, and are included in the implementation plan below.

Key Stakeholders, Resource Leveraging, Partnerships (to date)

Including the Parties, the primary stakeholders in this initiative have been The Nature Conservancy and NatureServe. The project has benefited from the experience of both organizations in addressing invasive alien species issues, particularly in the context of IAS pathways and information management strategies.

Advisory Groups Related to this Project

An advisorygroup for this project, with representatives from Canada, the United States, and Mexico, was formed in October 2008 under the auspices of the Biodiversity Conservation Working Group.

Rationale

Fulfillment of Strategic Objectives

This project is focused on strengthening capacity and addressing key information gaps, particularly at a trinational level. This will contribute to a coherent and focused approach to addressing the impact of trade-related biological invasions in North America. In addition, this project contributes to the improving border safety and security more generally within North America.

This project contributes to the fulfillment of CEC's 2005–2010 Strategic Plan through:

- Strengthening capacity and addressing information gaps for North American decision-makers to address the risk of biological invasions, particularly at sites of high ecological significance and vulnerability (Objectives 1, 7).
- Enhance trinational information sharing and use among field-level control agents to gather, analyse and systematise information on invasive alien species from other countries, to assist relevant decision making processes to prevent biological invasions (Objective 2).
- Further support a trinational framework for IAS information sharing and capacity building within key government agencies and organizations in North America (Objective 4).

Implementation of this project will complement other efforts during 2009 to inform development of the CEC 2010-2015 Strategic Plan—as well as future efforts with respect to address trade-related impacts upon biodiversity.

In addition, implementation of the above during 2009 will draw to a close the CEC's efforts with regard to alien invasive species under the current five-year work program of the Biodiversity Strategy and within the context of the 2005-2010 CEC Strategic Plan. The project has heightened awareness within North America and amongst the Parties of the regional trade-related and environmental concerns posed by invasive alien species, and contributed to improving capacity trinationally to manage IAS pathways and improve information management.

Trade and Environment

The economic impact of invasive alien species is one of the most tangible and unintended effects of market integration and globalization, largely wrought through regional or international trade mechanisms as well as tourism. Experience has shown that while some invasive species can have little or no environmental or economic impact, other species can have devastating environmental effects[4] and impact multiple sectors of the economy through lost production or eradication costs. This project will contribute to improving understanding of trade-related pathways, and helping to coordinate trinational control efforts.

North American Scope of the Project and its Relevance to the Three Parties

As invasive species routinely cross borders, often linked to trade and transportation corridors, the NAFTA governments have recognized that it is imperative that international cooperation represent a key component of their domestic IAS management strategies. This cooperation is well established in the agricultural and forestry sectors, including significant bilateral colaboration in such ecoregions as the Great Lakes. These and similar inter-governmental processes will help to ensure the sustainability and ongoing usefulness of project results.

There remains significant scope to help foster trinational cooperation on the management of invasive alien species within North America in sectors or ecoregions where trinational management efforts currently do not exist or are not well developed. These include, for example, marine invasive species in coastal ecological regions of trinational significance or in improved data and information sharing across all three countries.

[4] The International Union for the Conservation of Nature (IUCN) rates invasive species as the second-greatest threat to biodiversity behind habitat loss.

CEC Niche and Value Added

While there is significant trinational cooperation on IAS in some sectors in North America, as noted above, there are significant sectoral or ecoregional gaps. The CEC is well positioned to address these gaps and add value, through facilitated trinational collaboration, in priority eco-regions of shared concern with Mexico, Canada, and the United States.

Linkages with Other CEC Projects

Opportunities for effective interaction exist with a number of existing CEC projects, particularly project 6A addressing transportation corridors, as well as activities coordinated by the CEC's Law Enforcement and Wildlife Enforcement Working Groups. Numerous external links exist as well, such as the regional IAS management initiatives under the North American Plant Protection Organization. Agreement amongst the Parties on a specific priority ecoregion (or sector) within which the CEC will concentrate efforts within this project will contribute substantially to defining the specific nature and direction of these interactions. Note: the completion of the review of IAS risk assessment guidelines completed over the past three years (second task below) will contribute to the overall review of CEC activities outlined in Project 2.

Activities and Outputs

Key Activities

Key activities and outputs of this project in 2009 include:

- Agreed criteria developed and utilized for the selection of priority areas (hotspots) highly susceptible to biological invasions (including issues/sectors of common concern in these areas). Prior to this meeting, each country should undertake internal consultations in order to define the area of interest, and the criteria by which those regions/sectors should be selected [**Note: This task has been carried over from 2008, as agreed at that time, due to delay in establishing a project working group to guide implementation]**;
- Review facilitated by Secretariat to assist Parties in assessing progress and merit of the Priority Conservation Region approach to inform future strategic direction of IAS collaborative efforts – including the development of mitigation strategies [**Note: This task**

has been carried over from 2008, as agreed at that time, due to delay in establishing a project working group to guide implementation];

- Assessment undertaken of the work products from 2006–2008 on aquatic risk assessments, to determine whether the guidelines are useful to government inspection and customs services as well as for addressing risks along other pathways—and to determine the impact of these guidelines [**Note: This task has been carried over from 2008, as agreed at that time, due to delay in establishing a project working group to guide implementation]**;
- Common priorities, gaps, and opportunities for ongoing trinational cooperation on IAS identified;
- Field-level capacity building undertaken (where identified and necessary) on best management practices for the detection and control of new introductions of IAS.

Target Groups

The primary target group for this project continues to be decision-makers and resource managers, particularly with federal and state/provincial level authorities with responsibility for management of invasive species linked to trade.

Partners, Stakeholders

Key partners that will participate in the implementation of this project include US and Canadian government agencies with responsibilities for detection and prevention of invasive species (re domestic national strategies) as well as Conabio and other Mexican agencies involved in the detection and prevention of invasive species, and the Global Invasive Species Programme (GISP).

Leveraging

This project has benefited significantly from the extensive research and data collection work on invasive alien species within North America, particularly in the agricultural, marine, freshwater, and forestry sectors. Direct financial leverage from sector partners is not assumed for the completion of this project.

Outputs and Associated Timelines

The timetable for the delivery of project outputs for 2009 is outlined in the table below.

Anticipated Outcomes and Performance Indicators

The expected outcomes and performance indicators of the project include:

Direct Outcomes

- Increased understanding of risks of potential biological invasions in North American priority conservation regions.

Performance Indicator

- Identification of priority issues or regions of common concern to North American, including definition of an approach for future trinational cooperation on invasive species work.

Intermediate Outcomes

- Improved trinational strategies to reduce bio-invasion risks originating from trade-related pathways in selected priority areas of common concern.
- Strengthened institutional capabilities of response and prevention in selected priority areas and at along key pathways.

Performance Indicators

- Number of priority areas (within the selected PCRs) that are of high conservation significance, and are particularly susceptible to biological invasions, that have strategies to prevent, control and eradicate IAS.
- Engagement of key participants or organizations in the process of identifying priority issues and approaches for future CEC work on invasive species.

Final Outcomes

- Reduced economic and environmental impact from alien invasive species in North America.
- Strengthened capacity to address IAS issues in North America which will benefit directly from coordianted trinational cooperation.

Performance Indicators

- Degree of active participation of key stakeholders, particularly among the three North American governments, that can be engaged in future invasive species work.

Timetable, Project Completion and Sustainability Beyond

A timetable for the completion of outputs and project deliverables is provided in the table below.

Culminating Steps in Achievement of Program Objectives

The project will have contributed to improving understanding within North America of the trade related and environmental impacts resulting from invasive alien species, and helped to improve capacity to address this issue.

Target End Date for CEC Involvement

This project is scheduled to end in 2009. Future work in this area, however, may be proposed within next CEC Strategic Plan (2010–2015), at the discretion of the Parties.

Sustainability Beyond

To address the significant economic and environmental threats posed by invasive alien species, both the United States and Canada have developed detailed inter-agency management strategies within the past five years. Mexico is in the process of completing a similar strategy. As noted above, numerous sectoral or bilateral ecoregional initiatives also exist which incorporate IAS into ongoing workplans. Gven the diversity of efforts across the continent, it is expected that project outputs will be able to be readily incorporated into these ongoing efforts.

Communications

The primary target group for this project are decision-makers and resource managers, particularly with federal and state/provincial level authorities with responsibility for management of invasive species linked to trade. Project outputs will be communicated to the participants in this project through print and electronic means.

Information Management

Outputs from this project in 2009 are currently anticipated for internal use by the Parties only.

Distribution: General
C/OP09/Draft3/PROJ16
ORIGINAL: ENGLISH

Project 16	**Recovering the Vaquita and Promoting Sustainable Local Livelihoods**	**Responsible Project Manager at the CEC Secretariat**	Hans Herrmann
Planned Allocation	$125,000	**Working Group(s) associated with this work**	Biodiversity Conservation Working Group (BCWG)

Objective of Project

The purpose of this project is to support Mexico's recovery strategy for the vaquita (*Phocoena sinus)* by facilitating implementation of the CEC's North American Conservation Action Plan (NACAP) for this species.

Implementation of the NACAP by CEC partners will support Mexico's recovery efforts, forge a regional alliance to effectively eliminate vaquita by-catch, and promote sustainable livelihoods in the region.

The year 2009 represents the conclusion of all CEC work in direct support of marine NACAPs.

Background

Project History and Foundation

Although the vaquita is found only in Mexican waters, it is listed by the CEC as a species of common conservation concern in North America. In 2007 the CEC Council[1] instructed its Secretariat to initiate collaborative actions to support Mexico's efforts to recover the vaquita and promote sustainable local livelihoods.

The vaquita is regarded as the most critically endangered of all of the world's small cetacean species. Its current distribution is the most limited of all cetaceans and its total population is estimated to number only about 150. It has been scientifically demonstrated that the vaquita is in critical danger of extinction, primarily as a result of incidental mortality in entangling nets used to catch fish and shrimp. North American cooperation, both technical and economic, is urgently needed to deal with incidental bycatch and prevent the vaquita's extinction.

The vaquita has been identified by Mexico as a high priority for conservation and multiple agencies (e.g. SEMARNAT, SAGARPA) are working to address the threats facing it while ensuring the well-being of local fishermen.

Where such conservation needs exist, it is useful to utilize regional expertise and well-established relationships so that conservation goals and objectives may be achieved as efficiently as possible. The CEC is well placed to support the recovery program and to address the main threat to the vaquita, by: i) harnessing the expertise and lessons learned from Canada and the United States in recovery of species and the development of new technologies; and ii) increasing availability and use of alternative fishing gear that does not cause vaquita bycatch.

By engaging the other two North American countries, through the CEC, Mexican wildlife and fisheries agencies[2] will take advantage of their established know-how in the recovery of species, elimination of bycatch, and new technological developments, enhancing the effectiveness of the recovery actions that the Mexican government has begun to implement.

Important milestones of CEC engagement:

- In May 2007, the Biodiversity Conservation Working Group (BCWG) analyzed Mexico's proposal to develop a tri-national initiative in support of the Mexican strategy to conserve the vaquita.

[1] http://www.cec.org/files/PDF/ABOUTUS/Res-07-13-vaquita_en.pdf

[2] Conanp, Inapesca, Dirección de Vida Silvestre

- In May 2007, the Mexican government and *Alto Golfo Sustentable* (AGS) hosted a meeting in Mexicali, BC, with local stakeholders and members of the BCWG, to scope the potential of developing a NACAP for the vaquita.
- In June 2007, the CEC Council (under Resolution 07-13) instructed the Secretariat to initiate collaborative actions to recover the vaquita and promote sustainable livelihoods.
- In June 2007, the Secretariat of Agriculture and Fisheries (Sagarpa) and the Ministry of Environment (Semarnat) announced a multi-stakeholder, integrated plan to recover the vaquita and to ensure the management and sustainable use of marine resources in the Upper Gulf of California.
- In July 2007, a trinational vaquita Task Force was established to guide the implementation of the Council Resolution and develop a North American Conservation Action Plan for the recovery of the vaquita, which identifies trinational conservation priority actions and targets.
- In February 2008, the CEC completed the development of the vaquita NACAP.
- In March 2008, the BCWG recommended the CEC act as a catalyst for the sharing of information, explore new market opportunities for vaquita-friendly fisheries and services and support capacity building activities in the region.
- In October 2008, the CEC published the vaquita NACAP and held a trinational experts meeting to develop an implementation map of the NACAP, considering CEC's phase-out of this project by the end of 2009.
- Pursuant to the 2008 Operational Plan, the CEC initiated implementation of NACAP activities, in particular the experimental evaluation of alternative fishing gears.
- In October 2008, a trinational team of scientists[3] participated in the largest monitoring effort ever held to assess the population status of the vaquita.

The CEC's 2008 Vaquita NACAP[4] provides a trinational outlook on the species. It gives an updated account of the species and its current situation, identifies the main risk factors causing the species to suffer an unsustainable level of mortality, and summarizes the current management and actions taken in each country, as well as public and commercial perception of the species and the threats it faces. Against this background, it then offers a list of key trinational collaborative conservation actions, priorities and targets to be considered for adoption by the three countries. The actions identified address the following main objectives: i) threats prevention, control and mitigation; ii) use of innovative approaches to developing sustainable livelihoods in the communities; iii) research, monitoring and evaluation on the state of the vaquita population; and iv) increasing awareness of the vaquita, its plight, and importance within its ecosystem.

Key Stakeholders, Resource Leveraging, Partnerships

Implementation of this project will continue to be in partnership:

- Government partners: *Comisión Nacional de Áreas Naturales Protegidas* (Conanp); *Comisión Nacional de Acuacultura y Pesca* (Conapesca); *Reserva de la Biosfera del Alto Golfo de California*; Profepa; NOAA /NMFS; Department of Fisheries and Oceans Canada (DFO).
- NGO partners: *Iniciativa Alto Golfo Sustentable* (AGS); *Noroeste Sustentable* (Nos); WWF México; The Nature Conservancy, Pronatura; Vaquita.org; Conservation International (CI), among others.
- Academics/Scientists: CIRVA; *Centro de Investigación Cientifica y de Educación Superior de Ensenada* (CICESE); Scripps Institution of Oceanography, IUCN SSC.

Industry: Ocean Garden; Marine Stewardship Council.

Advisory Groups Related to this Project

Biodiversity Conservation Working Group (BCWG); and the vaquita NACAP ad hoc technical and scientific team.

[3] NOAA's Star Jordan scientific cruise engages scientists from the 3 CEC Parties

[4] The vaquita NACAP was officially launched in Puerto Peñasco, México on 28 October 2008.

Rationale

The designation by the CEC of North American species of common conservation concern (SCCC) was determined by considering and weighing various criteria, such as level of risk of extinction, common threats in the three countries, and the need for collaboration among Canada, Mexico, and the United States. Not all SCCCs need be migratory or transboundary to meet these criteria and to be considered species of continental concern. The vaquita is one of the most endangered marine mammals in the world. It listed as one of the CEC's 33 North American SCCC, with a limited habitat range that falls within CEC's Priority Conservation Area 25—the Upper Gulf of California.

The CEC has served as a catalyst for concerted, strategic action through the development of a North American Conservation Action Plan for the vaquita. This complements efforts being made by the Mexican government and other stakeholders to protect and promote the recovery of this critically endangered species.

International cooperation among Canada, Mexico and the United States has played a major role in the recovery of other marine mammals (such as gray whales) and more recently in dealing with incidental bycatch. With this in mind, the primary role of this project is to address the need and opportunity to enhance—through coordination—the effectiveness of measures undertaken to conserve this species of shared continental concern.

Fulfillment of Strategic Objectives

- Strengthening capacity, establishing a framework, and filling information gaps, for North American decision-makers to understand ways to promote sustainable development activities for the region, by the use of the Upper Gulf scorecard, as well as by exploring alternative "vaquita friendly" fishing gears and practices (Objective 7).
- Training activities for fishermen, as outlined in the vaquita NACAP, which will promote alternative and sustainable fishing gears and practices in the Upper Gulf of California (Objective 6).
- Sharing of scientific information and expertise on porpoises in order to support and increase knowledge about the vaquita and its habitat, as well as on the use of new technologies that allow for sustainable fishing practices and/or help prevent and reduce incidental by-catch, particularly of porpoises (Objective 4).
- Exploring new vocational opportunities for local fisheries, incorporating sustainable-use approaches which minimize impact on vaquita populations (Objective 9).

In 2008, the BCWG—with the support of the Secretariat—reviewed the progress and outcomes of all initiatives carried out under this and other biodiversity related projects. The resulting assessment will inform future consideration by the CEC Council concerning emerging biodiversity issues, as well as on other ecologically significant regions and species on which to focus its cooperative work.

CEC Niche and Value Added

The CEC Council in 2007 directed the Secretariat to prepare a North American Action Plan to assist Mexico's efforts to recover the Vaquita. Since that time the highest levels of the Government of Mexico have expressed an interest in CEC involvement in this issue. As noted during the 2007 Council meeting, the CEC is a unique venue where the environment and fisheries authorities of the three countries cooperate on tangible conservation-driven projects.

The CEC's catalytic role and value-added contribution is founded on the need to share the expertise and scientific knowledge acquired in Canada and the United States on marine mammal incidental bycatch, and on the practical implementation of sustainable fishing gears and practices, as well as on examples of compensation and buy-out schemes in fishing communities across North America.

The DFO in Canada[5] and NOAA in the United States, have a wealth of experience in dealing with incidental bycatch, development of smart gears, technological transfers, fishery regulations, and economic incentives to artisanal fishers. These agencies have worked under CEC's auspices on a

[5] http://www.gulfofmaine.org/times/spring2006/smarter.html

number of marine initiatives that include the reduction of incidental bycatch, fisheries management and marine mammal conservation.[6]

This exchange of experiences and information will be achieved through expert workshops, fishermen exchanges and short-time visits to the local communities.

North American scope

It is recognized that the vaquita is one of the most endangered marine mammal in the world, and it was listed a by a trinational multistakeholder group as one of the 33 North American Species of Common Conservation Concern (SCCC), with a limited habitat range that falls within CEC's Priority Conservation Area 25—the Upper Gulf of California (one of 10 MPAs of the NAMPAN pilot initiative).

Linkages with other CEC projects

- Conserving Marine Species and Spaces of Common Concern: habitat conservation (link to the Upper Gulf of California Biosphere Reserve which is member of the B2B NAMPAN network), sustainable fishing practices, and fisher training.

Activities and Outputs

Activities in 2009, the final year of the current CEC Strategic Plan and Biodiversity Strategy, are important to the phasing out of CEC's engagement on this and other NACAP species.

Activities under this project are guided by the vaquita NACAP, in particular its capacity-building, and information and technology sharing components. All aspects of this project are focused on and designed to be completed in 2009. Specific activities include:

- Support the trilateral exchange of information on matters such as, but not limited to: best fishing practices and alternative fishing gear to eliminate by-catch, acoustic monitoring of small mammals, and the potential use of economic instruments (switch-out, buyouts and compensation schemes).
- Facilitate the trilateral exchange of researchers, including resource and fishery economists, which will help in assessing the vaquita population health and status through scientific and acoustic monitoring surveys, as well as in having a better understanding of the intensity and trends of key socio-economic stressors affecting the vaquita and its habitat.
- Support the development and testing of alternative fishing gear to reduce incidental by-catch incorporating potential technological and knowledge transfers from successful case studies in Canada and the United States.
- The Secretariat will document, in a working paper (in-house) **[Note: This activity will be done in house by the Program Manager at no expense to the project]**, the process and lessons learned (that can be applied elsewhere) from this international collaboration on the conservation of marine biodiversity and engagement of local communities in sustainable practices.

Target Groups

The main targets of this project are local fishing communities (in particular those in the Gulf of Santa Clara, San Felipe and Puerto Peñasco); local fishery authorities; local and state governments; industry representatives and MPA managers.

Partners, Stakeholders

The main partners in the implementation of this project are the following:

- Government partners: *Comisión Nacional de Áreas Naturales Protegidas* (Conanp); *Comisión Nacional de Acuacultura y Pesca* (Conapesca); *Reserva de la Biosfera del Alto Golfo de California*; Profepa; NOAA /NMFS; Department of Fisheries and Oceans Canada (DFO).
- NGO partners: *Iniciativa Alto Golfo Sustentable* (AGS); *Noroeste Sustentable* (Nos); WWF México; The Nature Conservancy, Pronatura; Vaquita.org; Conservation International (CI), among others.
- Academics/Scientists: CIRVA; *Centro de Investigación Cientifica y de Educación Superior de Ensenada* (CICESE); Scripps Institution of Oceanography, IUCN SSC.

[6] NAMPAN, and the 3 marine NACAPs

- Industry: Ocean Garden; Marine Stewardship Council.

The Task Force comprises the following government agencies: Conanp and INE from Mexico; NOAA-NMFS from the United States; and DFO from Canada.

Leveraging

Financial and in kind contributions in support of the vaquita NACAP implementation are from:

- Conanp
- Inapesca
- Profepa
- NOAA and NMFS
- DFO

Associated outputs/products

- Development and testing of alternative fishing gear.
- US and Canadian participation in the design and implementation of monitoring cruises.
- Workshops pertaining to the implementation of the capacity-building component of the NACAP, in particular:
    - Training workshops on the use of alternative fishing gear and other sustainable fishing practices.
- Working paper: Lessons learned from international collaboration on the conservation of marine biodiversity and engagement of local communities in sustainable practices.

Anticipated Outcomes and Performance Indicators

The desired outcomes of the project include:

Direct Outcomes

- Increased knowledge and information about the health and status of the vaquita population;
- Increased knowledge of the ecological condition within the Upper Gulf of California Biosphere Reserve through the implementation of the scorecard methodology;
- Improved trinational collaboration on the prevention and reduction of incidental by-catch; and,
- Knowledge on the potential use of enabling approaches to conserve the vaquita, and promote sustainable livelihoods.

Intermediate Outcomes

- Implementation and adoption of strategies to eliminate incidental bycatch by relevant stakeholders.
- Increased participation of local communities in the use of sustainable fishing gear.
- Improved trinational collaboration on the assessment and monitoring of the vaquita population and its stressors.

Final Outcomes

- Reduction of by-catch to zero vaquitas.
- Recovery and conservation of the vaquita and its habitat.
- Effective incentives for local fishermen to eliminate the use of unsustainable fishing gears.
- Effective incentives for stakeholders to support and maintain zero by-catch efforts.
- Working paper: Case study on lessons learned from international collaboration on the conservation of marine biodiversity and engagement of local communities in sustainable practices

Performance Indicators

- Development and testing of alternative fishing gear.
- Use of new alternative gears and best practices
- Development and testing of alternative fishing gear.
- Implementation of monitoring cruises in the Upper Gulf.
- Number of fisherman participating in sustainable fishing practices.
- Frequency with which the Upper Gulf of California Biosphere Reserve and other MPAs report using the NAMPAN monitoring indicators and protocols.

Timetable, Project Completion and Sustainability Beyond

Culminating Steps in Achievement of Program Objectives

- In 2009, all CEC NACAP-related activities will be concluded.
- In October 2008, the vaquita ad hoc technical experts group will meet to define a tactical plan to implement the NACAP, and maintain the trinational interest and cooperation, beyond CEC's involvement.

Target End Date for CEC Involvement

2009

Sustainability Beyond

The year 2009 represents the conclusion of all marine NACAPs under the auspices of the CEC. It is expected that the lessons learned by the implementation of this and other marine NACAPs will allow the Parties and other relevant stakeholders to continue working together and using the vaquita NACAP as a framework for targeted collaborative actions.

Communications

The target audiences of this project are: local fishing communities (in particular those in the Gulf of Santa Clara, Puerto Peñasco and San Felipe); fisheries authorities; fishing industry stakeholders; local and state governments; conservation organizations; the general public in the communities cited above, as well as public audiences throughout North America with an interest in the conservation of endangered species.

Distribution: General
C/OP09/Draft3/PROJ18
ORIGINAL: ENGLISH

Project 18	**Strengthening Wildlife Enforcement in North America**	**Responsible Project Manager at the CEC Secretariat**	Marco Heredia
Planned Allocation	C$75,000	**Working Group(s) associated with this work**	Environmental Enforcement and Compliance Working Group (EWG). North American Wildlife Enforcement Working Group (NAWEG).

Objectives

This project has three main objectives:

- Stop illegal shipments of wildlife, in advance and at borders, and improve enforcement capacity to ensure that persons or entities shipping or attempting to ship such illegal materials are appropriately penalized;
- Develop training materials and exchange programs for areas such as wildlife inspection, and investigative and identification techniques; and
- Conclude CEC support for Mexico's efforts to institute a domestic capacity-building program on wildlife enforcement and assess the current training activities.

Background

Project History and Foundation

The North American Wildlife Enforcement Group (NAWEG) was created in 1994, when representatives of the Procuraduría Federal de Protección al Ambiente (Profepa—in Mexico), the Canadian Wildlife Service (CWF) and the United States Fish and Wildlife Service (USFWS) agreed to formalize the exchange of intelligence information and training related to wildlife regulations enforcement

NAAEC Article 1 directs the Parties to support the environmental goals and objectives of NAFTA. These include creating an expanded and secure market for goods and services in a manner consistent with environmental protection and conservation, promoting sustainable development, and strengthening the development and enforcement of environmental laws and regulations. In this vein, the North American Working Group on Environmental Enforcement and Compliance Cooperation (EWG), created by Council Resolution 96-06 (http://www.cec.org/pubs_docs/documents/index.cfm?ID=168&varlan=english), recognized the NAWEG as necessary to:

- assist in the implementation of the wildlife enforcement portions of the CEC program;
- serve as a contact with the Trilateral Committee for Wildlife and Ecosystems Management and Conservation (Trilateral Committee); and,
- act as the North American representative to Interpol on wildlife enforcement.

Key Stakeholders, Resource Leveraging and Partnerships (to date)

CEC activity in this area has engaged stakeholders in the enforcement community in each of our three countries responsible for wildlife and environmental law enforcement. Work to date has brought them together to determine needs for coordinated action against illegal trade of wildlife and its products across North America.[1] This work has also engaged the Federal

[1] See: http://www.usdoj.gov/opa/pr/2008/October/08-enrd-916.html

Police (PFP) and the General Attorney's Office (PGR) in Mexico and the USFWS and the Department of Justice (DOJ) in the United States.

Rationale

The international trade in wildlife is a multibillion dollar- business. The two major categories of traded items are live specimens of wildlife species and products derived from wildlife species. North America is a central player in the international wildlife market as both a consumer and supplier of products.

Canada, Mexico and the United States not only engage in direct cross-border commerce in various endemic North American species, but also serve as trade conduits for wildlife products from other regions and continents. The increase in trade among the three countries in North America requires close cooperation to manage the legal wildlife trade, including legal products and by-products, as well as to combat illegal trade for the sound management and conservation of the our region's wildlife resources.

From 1992 through 2002, listings of species under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) increased from 723 to 1,264 (up 75 percent) and the number of CITES member nations rose from 115 to more than 160 as countries.[2] In this context, North America is required to enhance enforcement of wildlife regulations including the CITES convention and to share expertise and best practices to use investigative, intelligence and forensic information gathering resources to detect, disrupt, and deter wildlife trafficking.

Fulfillment of Strategic Objectives

Capacity Building

This project directly supports the Capacity Building priority of the 2005–2010 Strategic Plan, namely the delivery of a multi-year initiative specified there for Mexico: "training wildlife enforcement officers and other stakeholders, as appropriate." Training of wildlife officers of the environmental attorney's office in Mexico—Profepa—is being accomplished with the support and advice from the wildlife enforcement agencies of Canada (Environment Canada–wildlife branch) and the US Fish and Wildlife Service. Under the 2007 Operational plan, the CEC conducted a *Capacity Building Needs Assessment for the Enforcement of Mexican Wildlife Laws.* In early 2008, and *w*ith the results of such assessment, Canada and the US supported Mexico in selecting training curriculum objectives, approach and course elements. The CEC Secretariat supported the scope and approach for the training initiative; Profepa identified the Mexican National Institute for Penal Sciences (*Instituto Nacional de Ciencias Penales*—INACIPE) for official recognition of the studies undertaken and the Mexican Secretariat for the Public Service (*Secretaría de la Función Pública*) included the course in its general formation curricula for wildlife inspectors in Mexico.

Trade and Environment

This project also supports the Trade and Environment priority of the CEC Strategic Plan. North America is a central player in the international wildlife market as both consumer and supplier of wildlife products and it is a natural target for Asian and South American wildlife livestock and related products and byproducts.

North American Scope of the Project

Collaboration at an operational level among Canadian, US and Mexican authorities has proven to be indispensible when considering both legal and illegal trade in wildlife and genetic resources. The United States is recognized as one of the most important centers of the wildlife trade, and Canada and Mexico are sometimes used to import and re-export shipments of wildlife intended to reach that market. Both Canada and Mexico represent high-potential exporters of legally traded wildlife and genetic resources. Wildlife trade in all three countries is regulated by national laws and through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), a treaty signed by all three countries. North American countries are then a potential target for illegal shipments of wildlife and its products.

In the operative field there have been major successes in combat illegal traffic of protected species. NAWEG coordinated operations have lead to imprisonment of smugglers and more protection of our borders and shared region by combating syndicates and criminal organizations exporting wildlife resources not only across North America, but through our borders to Asian and European markets as well[3].

[2] See: http://www.fws.gov/le/AboutLE/OLEStrategicPlanDec2005.pdf

[3] See: http://www.usdoj.gov/opa/pr/2008/October/08-enrd-916.html.

The EWG has recognized the need for further actions under the NAWEG and recognized the opportunity to catalyze the support and expertise of Canadian and US experts and senior enforcement officials to enrich and share best practices and knowledge combating wildlife smuggling across the borders.

CEC Niche and Added Value

The NAWEG, with the support of the CEC Secretariat, has been a vehicle to convey resources in support of effective wildlife enforcement across the region.

As a result of this focus and the continued engagement of senior enforcement officials, via the NAWEG and EWG, the CEC is well suited to support fulfillment of the objective in NAAEC Article 1(g) "*enhance compliance with, and enforcement of, environmental laws and regulations;*" Moreover, this project represents specific fulfillment of the CEC's 2005–2010 Strategic Plan (5.2). "*Specifically, the CEC's goal is to strengthen the capacities of the three countries to manage environmental issues of common concern. Its objectives over the next five years— focusing on Mexico—are to cooperate to: 1. Strengthen capacities, where needed, to improve compliance with wildlife laws…*" Thus, this project "*will benefit all three countries: more effective Mexican enforcement of its wildlife laws, for example, will help protect migratory species that the three countries share…,*[4]"

Linkage with Other CEC Projects

Potential cross references and linkages are with the Trade and the Enforcement of Environmental Laws initiative, not only because in Canada and in Mexico two of the key agencies are involved in those initiatives, but also because intelligence-led work can bring benefits to the other project and vice-versa.

Activities and Outputs

Key Activities

The activities under this t project are intended to facilitate the exchange of information, expertise and best practices on wildlife enforcement and build capacity, most notably in Mexico by supporting its efforts to institutionalize training for wildlife inspectors and officials. The project will also facilitate exchange of information for effective and coordinated wildlife enforcement across North America.

Under **Task 1**, The Secretariat will follow up on the development of the multi-module stages of the training courses in order to conclude this three-year initiative.

Officials from the Canada and the US will provide feedback to their Mexican counterparts in order to adjust the subject matter and materials from the early stages of the multi-module training sessions, as necessary.

The Secretariat will support the Parties to assess the training activities in the first year of effective training and will adjust the course contents as appropriate and directed from the parties. The Secretariat will also disseminate the training model and lessons learned from it in order to replicate the training model where necessary.

Under **Task 2**, the CEC will support an *ad hoc* group to foster improved understanding of illegal activities to combat and prevent wildlife smuggling among North American countries. This group will bring together environmental administrative authorities and law enforcement officials from federal enforcement agencies in the three countries for the exchange of information on species, trends, patterns, *modi operandi* and routes commonly used for wildlife smuggling across North America.

Under **Task 3**, the CEC will update the North American public on NAWEG activities and accomplishments and facilitate outreach to other international agencies, nongovernmental organizations, academia, research institutes, forensic laboratories and local enforcement agencies to exchange information, expertise and data gained on the efforts and success of the Parties to effectively enforce wildlife regulations in North America through NAWEG. The material contained at the CEC website will be available for future training/reference to officials of each country.

Target Groups and Stakeholders

- Enforcement officials from the three countries
- Law enforcement agencies from the three countries
- National Institute for Penal Sciences (Mexico)
- Prosecutors
- Customs agencies

[4] CEC 2005–2010 Strategic Plan, available at http://www.cec.org/files/PDF/ABOUTUS/2005-2010-Strategic-plan_en.pdf

- Forensic laboratories
- Universities and research institutions
- Nongovernmental organizations

Leveraging

Each institution public institution will leverage resources for the completion of the training course. Leverage is also to occur in the conformation of the ad hoc group for addressing wildlife smuggling across North America.

Outputs and Associated Timelines

Task	Output	Timeline
1	Conclude the three-year North American training initiative for wildlife enforcement.	Starting January 2009
	Report on training outreach, lessons learned, opportunities and challenges.	Fall 2009
2	Scoping meeting for the conformation of an *ad hoc* group to foster improved understanding of illegal activities to combat and prevent wildlife smuggling among North American countries	Spring 2009
3	Website update	To be under continuous development, starting 2009

Anticipated Outcomes and Performance Indicators

Direct Outcomes

- Increased awareness and knowledge of the regulations, best practices and expertise pertaining to controlling the traffic of wildlife, including products and byproducts.
- Increased capacity to stop, in advance and at borders and crossing points, illegal shipments of wildlife, including products or byproducts.
- A North American approach to address the threats to biodiversity conservation and wildlife from the import/export of illegal shipments including its products and byproducts.
- Authorities and officials better prepared and coordinated to address from a North American perspective, threats to biodiversity conservation and wildlife including its products and byproducts that could potentially jeopardize North American endemic, protected and endangered species.

Intermediate Outcomes

- The Parties better prepared to combat illegal traffic of wildlife across borders, and better supplied with information on the patterns, trends and modi operandi of syndicates and criminal organizations that threaten the viability of endemic, protected and endangered species of wildlife across North America.
- Better and more efficiently coordinated enforcement of wildlife regulations across North America.
- More information available to decision makers and public on the achievements of enforcement personnel and a more unified approach across North America in the enforcement of wildlife regulations.

Final Outcomes

- Fewer illegal shipments of wildlife across North American borders.
- Increased understanding on the trends, areas and patterns of illegal activity in violation of CITES regulations.
- Reduction in the rate of wildlife criminal offenses and activity in North America.
- Coordinated action across North America to guarantee environmental governance and effective wildlife enforcement.

Performance Indicators

- Number of trained enforcement officers in Mexico.
- Number of institutions participating in the training efforts.
- Number of institutions participating in information and intelligence sharing.
- Number of potential areas/species identified in a common North American approach to coordinated actions pertaining to wildlife.
- Number of hits on/consultations of the CEC-NAWEG website.
- Number of illegal shipments stopped
- Number of offences punished through cooperative work.

Timetable, Project Completion and Sustainability Beyond

The current project will conclude the CEC's involvement in implementing the training initiative with the transfer to Mexican authorities of the ongoing responsibility to maintain this activity as they determine. Profepa in Mexico will take over the training activities at their website once the collaborative work at the CEC is delivered to Mexico.

Task 1 will develop the training sessions in three multi-module stages throughout the year. The first stage will be undertaken in late winter 2008–early spring 2009; the second will be completed by late summer, and the third in fall 2009. The Secretariat will conduct a review and will present it to the Parties by fall 2009.

Target End for CEC Involvement

This activity will conclude this year.

Sustainability Beyond

Profepa in Mexico will be responsible for using and updating the training course in accordance with its own needs.

Task 2 will occur by spring 2009. The CEC will bring together key stakeholders to identify and address regional concerns, and will determine a plan of action to address such concerns during the year and to define a North American action approach to more coordinated wildlife enforcement in the region. Continuous work is to be determined by the parties according to the results and findings at the ad hoc group.

Task 3 will be developed continuously throughout the year. By early 2009, the CEC–NAWEG website will be restructured and the Secretariat will update it as necessary. This activity is to be continued beyond 2009.

Communications

The participating agencies will be responsible for communicating the development and results of the course. The CEC will provide outreach through its website to the North American public, the private sector, academia and research institutions.

The Secretariat will provide information on the completion of activities and agreements among the Parties and provide results of its activities on the CEC website.

Information Management

The CEC-NAWEG website will undergo a redesign to update the information presented on the site. It will be updated as necessary throughout the year.