

3.4.1 Capacity Building for Pollution Prevention

Project Summary

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

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

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

Objectives

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

- Promote the use of pollution prevention techniques and technologies among small and medium-size Mexican industrial establishments and support them in the development of their environmental management capacities.
- Facilitate the application of pollution prevention measures in industry through the timely offering of technical assistance, information and financing for projects of this nature.
- Consolidate the Round Table on Pollution Prevention in Mexico.
- Strengthen the ties and joint and cooperative efforts among the pollution prevention round tables in North America.
- Explore, as appropriate, collaboration with the pollution prevention round tables as well as other relevant organizations on the implementation of the information network for pollution prevention in North America
- Contribute to a CEC workshop to be organized by the EMS project within the Law and Policy program on the implementation of environmental management systems in small and medium-size enterprises, to identify and draw on regional experiences and lessons learned.
- Strive to make Fiprev financially self-sustaining so that it can continue to finance projects to prevent pollutant generation by small and medium-size Mexican industrial establishments.
- Promote mechanisms to increase the Fund's financial resources and link it with the activities of the Round Table on Pollution Prevention in Mexico.

Rationale

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

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

organizations, institutions and companies further facilitates the implementation of pollution prevention initiatives in the region.

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

In Ottawa in June 2002, the CEC Council expressed its recognition and support to the North American Pollution Prevention Partnership as well as its intent to identify future work areas for pollution prevention, with particular focus on those areas where the CEC can contribute added value to pollution prevention activities proposed by the round tables.

Progress to Date

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

To counter this situation, the study recommended the following:

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

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

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

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

According to the CEC's program for 2002, 30 additional loans would be granted by the end of 2002. As of November 2002, 48 loans totaling approximately US\$1.15 million have been granted. Of the financed projects, 35 are in the tanning industry and the others in food, foundries, electroplating, dry cleaning, ceramics, chemicals and metalwork. Currently, funding requests for many more projects are being studied, primarily in the areas of tanneries and electroplating.

As of November 2002, there has been 100 percent repayment of financing granted, amounting to around US\$550,000 in capital plus US\$176,000 in interest, as per the schedules of payments. The accumulated benefits of these projects include savings of 185,100 cubic meters of water and avoidance of discharges for 3,547 tons of chemicals. So far the economic savings have reached US\$1.36 million.

The fund is administered by a technical committee, which is cochaired by Concamin's president and the CEC's Mexico City office director, as well as representatives from the Canadian and US Councils of International Business (CCIB and USCIB) and, ultimately, from donor institutions. Since no donor institutions have as yet contributed to

the fund, at this point there are no representatives of these in the committee. This committee takes the principal decisions related to the fund.

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

The fund is now in the process of being further capitalized with a contribution of more than US\$265,000 by the Mexican Ministry of Economy. In addition, Fiprev is in the process of signing a contract with Nafin to access funds from this bank, up to US\$1 million. Fiprev involves resources for more than US\$3 million.

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

The round table has had five national meetings so far, most recently on 17–20 September 2002, in Guanajuato. The round table is in the process of establishing linkages with regional pollution prevention round tables within Mexico in order to enhance capacities for these initiatives in other parts of the country.

A public declaration on cooperation among the North American pollution prevention round tables was disclosed during the national meeting of the Canadian Round Table in Quebec in April, 2002. This declaration states that the three organizations, in partnership with the CEC, will collaborate on pollution prevention policy, capacity building, stakeholder involvement and environmental efforts leadership throughout North America. The mission of the North American Pollution Prevention Partnership (NAP3) is to advance environmental protection through pollution prevention. The goals include: i) advancing pollution prevention policy in each country and through the continent; ii) sharing information, educational and member resources and; iii) enhancing financial and technical resources to implement pollution prevention programs throughout North America. The three countries met in Guanajuato during the annual meeting of the Mexican Pollution Prevention Round Table and agreed to create a steering committee, including one representative from each national round table, one federal government representative of each country and one representative from the CEC, with alternates to be pre-identified to ensure continuity. The Steering Committee will lead the implementation of activities, with government representatives providing guidance and support and keeping Alternative Representatives abreast of developments, the round tables' representatives leading on the initiatives, and the Secretariat bringing value-added. Other stakeholders, such as industry, environmental nongovernmental organizations, other governments, academia, etc., will be invited to participate to discussions as required and their views considered in decision-making. Meetings of the NAP3 will coincide with the meetings of the Round Tables, and conference calls will be scheduled quarterly at a minimum, organized and facilitated by each country on a rotating basis. A first conference call took place on November 26, organized by Canada, to flesh out the work program for 2003. The 2003 planning exercise should bring a longer vision on the work program, once the NAP3 has had a chance to assert itself as a new entity.

Actions 2003

The actions to be taken in 2003 are geared toward complementing and consolidating the pollution prevention initiatives that the CEC has taken to date. Cooperation among the North American round table organizations on pollution prevention will continue to be promoted, and the strengthening of the Mexican round table will be supported. Regarding the Mexican round table, the diversification of the organization's sources of financing will be sought, as will the establishment of regional round tables (including on the United States-Mexico border) and partnerships among the various players in the working groups. The Mexican round table will be supported by co-sponsoring its annual meeting, as well as facilitating activities within its working groups.

With support of the CEC, the NAP3 Steering Committee will meet face to face during the national events of the round tables in each country and will hold conference calls—at least quarterly—to advance common projects for the region. The host of the first conference call in 2003 will be the US and the call is scheduled for February 11.

In collaboration with the pollution prevention round tables as well as other organizations, the NAP3 will: (1) implement the pollution prevention information network in North America, enhancing the existing <www.p2win.org> web site, with a focus on Canada, Mexico, and the US; (2) conduct at least three annual Pollution Prevention Global Information Network (P2GIN) training sessions at each of the annual round table meetings; (3) identify organizations that can facilitate information exchange between the three countries; and (4) cooperate on pollution prevention within electronics scrap activities and industries in the region. It will also help to decentralize pollution prevention in Mexico, through the creation of regional centers, and implement environmental management systems in small and medium-size enterprises. In doing so, NAP3 will provide business owners and managers hands-on experience in implementing EMS. The CEC workshop on this topic will be a coordinated effort of the Enforcement Working Group of the Law and Policy Program and NAP3 and will draw upon existing public and private efforts in the area.

The CEC will work with representatives from the federal and state governments, industry and nongovernmental organizations to establish linkages among regional pollution prevention round tables in Mexico and the Mexican Pollution Prevention Round Table. The initiative will develop capacities in Mexico to prevent pollution in other parts of the country, as well as to help coordinate, house and locate funding for a number of current activities, including environmental audits and environmental management systems, byproduct synergy, and hazardous waste management strategies.

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

2003	Estimated Resources Required (C\$)
Action 1: Collaboration among the round tables on pollution prevention in North America.	30,000
• Activity 1: Trinational group on pollution prevention policy in North America	30,000
Action 2: Support for the consolidation of the Round Table on Pollution Prevention in Mexico.	35,000
• Activity 1: Strengthen the Round Table on Pollution Prevention in Mexico	20,000
• Activity 2: Establish linkages between the Round Table on Pollution Prevention in Mexico with regional round tables on pollution prevention and thereby extend the reach of the initiative.	15,000
Action 3: Promotion of corporate environmental stewardship	45,000

<ul style="list-style-type: none"> • Activity 1: Collaboration with the pollution prevention round tables as well as with other relevant organizations on the implementation of the information network for pollution prevention in North America. Sub-activities may include: <ul style="list-style-type: none"> Recruit and engage in ongoing dialogue members of the Mexican round table, P2RX and other relevant organizations on the P2WIN advisory group and the technical expertise committee; Conduct training sessions with the members of all three round tables to demonstrate the capabilities of P2 WIN and the network of round tables and also receive feedback on how people can contribute; Conduct focus group sessions with those involved with making the info sharing happen and how it can be improved. The people at the focus group sessions should represent their round table and know what the needs are each of the RT and would include information providers, advisory group members and technical expertise; Develop linkages with the Mexican working groups and profile their activities on the P2WIN site. Create infrastructure for sharing and collaboration on cross cutting topics; Strengthen the technical infrastructure behind the Round Table News exchange mechanism between Canada, Mexico and the US. Work with each round table to improve their news collection and formatting for improved access; and Build P2WIN web site to accommodate other languages by translating core components in Spanish and French. 	25,000
<ul style="list-style-type: none"> • Activity 2: Promote environmental management systems in small and medium-size enterprises in the electronics sector through, for example, industry associations and greening supply chains of large corporations. 	20,000
<p>Action 4: Fiprev follow-through</p>	7,000
<ul style="list-style-type: none"> • Activity 1: Campaign to promote Fiprev among small and medium-size businesses through Funtec and Concamin; sponsor two meetings of the Fiprev technical committee, three meetings of the Fiprev executive commission and two meetings with potential donors; the CEC will also seek to obtain contributions to the fund from large corporations and foundations as well as to transfer CEC involvement on Fiprev to the pollution prevention round table. 	7,000
<p>Total Resources Required</p>	117,000

Public Participation

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

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

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

Capacity Building

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

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

Furthermore, the Round Tables Partnership is creating and strengthening links that facilitate the flow of information necessary for the promotion and efficient implementation of prevention practices, in addition to creating joint value-added projects.

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

Expected Results

The following results and benefits are expected through the Mexican Pollution Prevention Round Table:

- Diversification of the organization’s sources of financing and increase of its economic self-sufficiency.
- Working groups operating on a regular basis on P2 policy, P2 implementation, education and training, tools for P2, and P2 funding.
- Webpage located within the Mexican Cleaner Production Center’s webpage, with information pertaining pollution prevention tools and contacts.
- Strengthening of capacities for the pollution prevention around the country by means of the linkages between regional P2 round tables and the Pollution Prevention Round Table in Mexico.

The following results and benefits are expected through the North American Pollution Prevention Partnership:

- Strengthening of the trilateral group, including participation of government and industry.
- Initial pilot implementation in North America of the Pollution Prevention Global Information Network (P2GIN)
- Exploration of environmental management system implementation in small and medium-size enterprises in the electronics sector of North America.
- Better understanding and cooperation among North American stakeholders.

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

- Granting of financing to:
 - 60 additional businesses in 2003,
 - 80 more in 2004 and
 - 120 more in 2005.

These actions are expected to bring the following environmental benefits:

- Reduction of water consumption by:
 - 123,000 cubic meters during 2003,
 - 146,000 cubic meters during 2004 and
 - 238,000 cubic meters during 2005.
- Reduction of waste generation by:
 - 2,700 tons during 2003,
 - 3,200 tons during 2004 and
 - 7,200 tons during 2005.

And approximately the following economic benefits for the businesses:

US\$1.7 million in 2003,
US\$2.3 million in 2004 and,
US\$3.4 million in 2005.

Expected Partners and/or Participants

Some of the Partners and participants associated with this project belong to the principal organs of Fiprev—either the Executive Committee or the Technical Committee. Representatives of the following institutions participate:

Technical Committee:

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

Executive Commission:

Instituto Politécnico Nacional
Nacional Financiera (Nafin)
Semarnat
National Bank of Foreign Trade (*Banco Nacional de Comercio Exterior*)

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

The Canadian, Mexican, and US, Pollution Prevention Round Tables, as well as the federal governments of the three countries, are also included as partners of the NAP3 initiative.

Linkages to other CEC Projects

Reduction on emissions of toxic substances such as lead in productive processes is the best way to lower risks to human health and the environment. In this way the actions in the Children's Health and the Environment in North America project as well as those in the Sound Management of Chemicals initiative are designed to consider preventative approaches such as pollution prevention. In addition, pollution prevention can improve air quality through the introduction of best available technologies.

Information on pollution prevention measures taken by industries involved in the national pollutant release and transfer registers may be included within the CEC's Taking Stock project, particularly now that the Mexican PRTR is being developed.

Promotion of Corporate Environmental Stewardship involves the use of several environmental tools such as environmental management systems, which in turn may foster the introduction of pollution prevention principles in order to comply with environmental law and regulations.