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## **International POPs Elimination Project**

*Fostering Active and Efficient Civil Society Participation in  
Preparation for Implementation of the Stockholm Convention*

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# **Identification of POPs pollution sources using a participatory approach in Eastern Morelos, Mexico**

**Centro de Análisis Social, Información y Formación  
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## About the International POPs Elimination Project

On May 1, 2004, the International POPs Elimination Network (IPEN <http://www.ipen.org>) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project.

IPEP has three principal objectives:

- Encourage and enable NGOs in 40 developing and transitional countries to engage in activities that provide concrete and immediate contributions to country efforts in preparing for the implementation of the Stockholm Convention;
- Enhance the skills and knowledge of NGOs to help build their capacity as effective stakeholders in the Convention implementation process;
- Help establish regional and national NGO coordination and capacity in all regions of the world in support of longer term efforts to achieve chemical safety.

IPEP will support preparation of reports on country situation, hotspots, policy briefs, and regional activities. Three principal types of activities will be supported by IPEP: participation in the National Implementation Plan, training and awareness workshops, and public information and awareness campaigns.

For more information, please see <http://www.ipen.org>

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This report is available in the following languages: English

# Identification of POPs pollution sources using a participatory approach in Eastern Morelos, Mexico

During the course of this research project, we were able to make an initial diagnosis of the presence of sources of Persistent Organic Pollutants (POPs) in the Eastern Region of Morelos, through the identification of possible sources of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDD/PCDF). The Center for Social Analysis, Information and Popular Education (*Centro de Análisis Social, Información y Formación Popular*—Casifop) and the Ecological Action (Acción Ecológica) citizen group were in charge of the project.

Activities began with three community workshops in which the main objective was to learn about environmental problems in the Eastern Region from the inhabitants themselves. To this end, organizations of teachers, citizens, senior high school students, university students, neighbors, peasants (*campesinos*) and greenhouse owners were invited to attend.

The result of the workshops was a preliminary mapping of potential sites considered to be focal points of contamination. The workshops were led by Dr. Andrés Barreda, coordinated by Mariana Barreda (anthropologist) and Larisa de Orbe, and held at the *El Callejón* Cultural Center, in the city of Cuautla in the state of Morelos. A list of email addresses was established for exchanging information regarding POPs.

In order to document more information, we consulted the National Institute of Public Health (INSP) library, which lacks information on POPs but does have information on organochlorine substances. We consulted theses from the Center for Biological Research (*Centro de Investigaciones Biológicas*) at the UAEM, documents from the Mexican Institute of Water Technology (*Instituto Mexicano de Tecnología del Agua*—IMTA), and material from the Association of Users of the Cuautla River (*Asociación de Usuarios del Río Cuautla*—Asurco).

Then, a series of visits was made to the sites identified in the workshops. A visit was made to the Cuautla and Yecapixtla sanitary landfills, which are open-air trash dumps where we could observe a large amount of plastic bags, polyester clothing, tires, chemical housecleaning products, medicines, electric batteries, and domestic electrical appliances that had been thrown out without adequate handling and that had been burned.

A survey was conducted of brick-making kilns, and we could observe that some operate without municipal permits, and some use tires and used oils as fuel, which the state oil company, PEMEX, supplies by tank trucks. The deterioration in the health of people and animals living around these sites is obvious. However there is no control of this situation on the part of authorities from the health department or from the municipal government.

To learn more about the use of agrochemicals, visits were made to various fields where crops are grown. A great variety of containers were observed to have been left in the fields, and they are burned during the dry season when it is time to begin preparing the ground for planting. The brand names of the containers were noted. Also, visits were made to ornamental plant nurseries, and the agrochemicals used were noted. We could observe how some greenhouse owners burn agrochemical containers after they have been used.

A visit was made to the sugar refinery to learn more about the processes of burning sugar cane pulp, but we were denied access. We traveled around the outer limits of the installations, and the release of black smoke into the atmosphere from seven smoke stacks was evident, as well as the discharge of wastewater into irrigation canals.

A visit was also made to the Temola tannery, where we were shown the production processes used and the wastewater treatment plant, where the wastewater is discharged directly into the Cuautla River. It was not possible to take a water sample there however the copper red color was evident.

It is important to emphasize that photographs were taken during all the visits just described. Also, interviews were conducted with municipal environmental authorities, personnel working in industries, communities affected, greenhouse owners, agrochemical salespersons, teachers and farmers, and these interviews made it possible to learn about some of the industrial processes carried out and the use of agrochemicals in rural areas.

During the visits to rural areas, various samples were taken of dirt, irrigation water, ash, and sludge, for analysis and detecting whether or not organochlorine and other types of substances were present. In this regard we were assisted by Dr. Rafael Vázquez Duhald of the Institute of Biotechnology at the National Autonomous University of Mexico (UNAM) who agreed to conduct the corresponding studies. The initial results are described in Annex 4 of the final report. Other results that may be highly useful for future research studies are still pending at the University of the State of Morelos.

A visit was made to a company called *Bioteconología de Residuos S.A. de C.V.*, which collects biological-infectious hazardous wastes from private clinics and doctors' offices in the region. According to the explanation we were given, only a few establishments use the services offered by this company, since the costs are rather high. Many of these private clinics and doctors' offices deposit their wastes in the trash collection truck, or burn them behind their facilities.

Visits were also made to some mechanic shops, and we found that the wastes from these shops, including used oil, *estopas* (fibers used for cleaning up grease), containers and cans, are sometimes burned at the site or disposed of in trash dumps. Used oil is sold for use as fuel in brick-making kilns and to individuals for water-proofing wood. There is no control or supervision by municipal environmental authorities, and in fact most of these shops operate informally, without the corresponding land-use permits.

We went to the Mexican Institute of Water Technology (IMTA) where Dr. Erick Bandala, Assistant Coordinator for Water Quality, commented to us that the Institute has researched the presence of *polychlorinated biphenyls* (PCBs) in the Eastern Region, however since these studies as classified as confidential information, we did not have access to them, since it was explained to us that industries are those who request these studies to be conducted.

We visited a workshop where transformers from the Federal Electricity Commission (*Comisión Federal de Electricidad*—CFE) are repaired, and we also asked the public relations office of the CFE branch for the Central-South Region if we could see its program for handling transformers that contain askarels, however this information has not been offered to date.

With all the information collected, we prepared a 22-page final report, and an informative brochure was designed for communities, together with a poster.

To bring this project to the public's attention, we participated in four local radio programs aired on the *La Comadre* and *Stereo Latina* stations, and spoke about the research project and POPs contamination. We also participated in a cable television program "Morelos 2000" on Channel 78.

An article on the project is being written for publication in local and regional newspapers.

Currently, the *Acción Ecológica* office functions as a center for environmental information on POPs where any citizen can go to see a video and obtain training for replicating the workshops in their own neighborhoods.

During the course of the project, two students who completed undergraduate degrees in education got together to fulfill their social service requirement and were trained to replicate the workshops in their own schools and communities.

In conjunction with the Citizen Front for the Defense of Water (*Frente Ciudadano por la Defensa del Agua*), a training workshop on environmental law was given by Dr. Raquel Gutiérrez Nájera, to address the topics of dioxins and the Stockholm Convention.

A fact sheet on POPs written in accessible, common language and including images has been published and is being widely disseminated to communication media and in communities.