

Overview of NACEC's PRTR Project

NACEC's North American PRTR project seeks to ensure that citizens have access to accurate information about the release and transfers of toxic chemicals from specific facilities into and through their communities. Project activities include:

- publication of an annual report on North American pollutant releases and transfers (*Taking Stock*) and development of a web site to enable users to access the matched data set;
- supporting the further development of the PRTR program in Mexico;
- fostering enhanced comparability among the national PRTR systems;
- exploring ways to improve access and enhance understanding of PRTR data in

collaboration with interested and concerned parties; and

- coordinating with other international organizations in the context of global and regional PRTR-related activities.

The International Council of Chemical Associations (ICCA) supports emissions reporting and believes these programs can provide valuable information that can help document and stimulate reduction in emissions and communicate information to key audiences." ICCA, ICCA Comments on Pollutant Release and Transfer Register (PRTR), 2000.

Consultations and collaboration with stakeholder groups—including governments, industry, public interest groups and others—are an essential part of NACEC's PRTR program. A multi-stakeholder Consultative Group composed of a broad range of interested groups and individuals from the three countries has helped to

guide the development of the annual *Taking Stock* reports and other aspects of the North American PRTR project.

The North American Fund for Environmental Cooperation and PRTRs

The North American Fund for Environmental Cooperation (NAFEC) funds community-based projects in Canada, Mexico, and the United States that promote the goals and objectives of NACEC. A number of the projects funded in 2000 are focused on PRTRs, access to information, and public participation in environmental decision-making. For example, NAFEC is supporting local efforts to:

- make use of PRTR data at the community level in two cities on the Mexico-US border, involving local officials, industry and the community. Enlace Ecológica, A.C., Agua Prieta, Sonora, Mexico.
- build an environmental justice network through citizen monitoring, air sampling, and use of geographic information systems. Little Village Environmental Justice Organization, Chicago, Illinois, USA.
- design a program of outreach, education and support services for public and community users of PRTR information. Canadian Institute for Environmental Law and Policy, Toronto, Ontario, Canada.
- operate a virtual forum to assist the public in accessing and using PRTR data and other environmental information in Mexico.

For more information

For additional information, or if you would like to get involved in NACEC's PRTR project, please contact:

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Or visit the PRTR page of NACEC's web site (under 'Pollutants and Health'):

<http://www.cec.org>

In brief



Tracking Toxic Substances in North America

The North American PRTR Project

In 1984, several thousand residents of Bhopal, India, died from exposure to a cloud of methyl isocyanate gas, accidentally released from a pesticide plant. Around the world the disaster provoked a re-examination of the public safety hazards posed by industrial facilities. The right-to-know about the use and transport of toxic chemicals in populated areas gained widespread recognition.

In many jurisdictions, however, gaining access to this kind of information remains a challenge. Central registries of the emission and movement of toxic substances can help. Known as pollutant release and transfer registers (PRTRs), they are helping citizens, environmental professionals, industrialists and governments measure and manage toxic substances.

In a national PRTR program, industrial facilities in certain, specified economic sectors report annually on both the amounts of priority chemicals released on-site to the environment and the amounts transferred off-site for treatment or disposal. The chemicals themselves are chosen for various reasons. Some, such as asbestos and benzene, are carcinogens. Others may damage particular bodily organs. Some are known or suspected developmental or neurotoxins. Of particular concern with regard to long-term effects are bioaccumulating toxic pollutants, such as certain heavy metals and organochlorines, because of their potential to build up in the tissues of humans and other living organisms.

Because it compiles the data in a searchable database, the PRTR provides an important tool to such diverse users as, for example, a community group evaluating the environmental record of a local manufacturing plant, an industrial plant manager setting goals for reducing toxic emissions, or an environmental scientist investigating the effects of industrial pollutants on the air, water, and soil of a region.

By putting data on pollutants and their sources in the public domain, PRTRs provide all members of society—citizens, corporate leaders, environmental advocates, researchers, government officials—with a valuable tool for setting priorities, promoting environmental improvements and tracking progress.

Integrating pollutant data across borders

While PRTRs are typically established on a national basis, pollutants move freely across political borders through the air and water. They are also transported internationally in trucks, trains and boats for treatment or disposal. Recognizing this transboundary reality, the North American Commission for Environmental Cooperation (NACEC) has mounted a trilateral effort to track data on toxic substances on a continental scale.

NACEC was established by the NAFTA partners—Canada, Mexico and the United States—to build cooperation among the three countries in protecting their shared environment, with a particular focus on the challenges and opportunities that arise in the context of continent-wide free trade.

Since the beginning of its North American PRTR initiative in 1995, NACEC has worked with the national PRTR programs of Canada (National Pollutant Release Inventory), the United States (Toxic Release Inventory), and Mexico (*Registro de Emisiones y Transferencia de Contaminantes*) to develop a North American profile of pollutant releases and transfers. In its annual publication *Taking Stock*, NACEC analyzes North American PRTR data to identify major trends, while

promoting public awareness of the registers and the ways in which they can be used to protect the environment.

In developing the *Taking Stock* report on North American pollutant releases and transfers, NACEC compiles information for the industries and chemicals that are common among the national PRTR lists.

“As community representatives, our interest in accessing PRTR data is to facilitate the dialogue among government and industry with the public about how chemicals are being managed, in order to increase public confidence and empowerment in decisions being made which might affect their communities.”
— Laura Durazo, Director, Proyecto Fronterizo de Educación Ambiental, Tijuana, Mexico, *The Power of Pollutant Information in the Hands of the Public, 2000.*

Currently, this “matched” North American PRTR data set includes chemicals and industries that are common to the US and Canadian inventories. (Mexican data will be incorporated as it becomes available.)

The synthesis of national PRTR data into a continent-wide database for analysis places North America at the forefront of a worldwide trend. While a number of industrialized countries have implemented national PRTR programs, the cooperation

between Canada, Mexico and the United States breaks new ground.

In June 2000, the NACEC Council, composed of the top environmental officials of Canada, Mexico and the United States, signed Council Resolution 00-07 on Pollutant Release and Transfer Registers. Through this Resolution, the Council emphasized the value of PRTRs as tools for the sound management of chemicals, for encouraging improvements in environmental performance, and for providing the public with access to information on pollutants in their communities. The Resolution also specifically reaffirmed the Council’s commitment to NACEC’s analytical work on North American PRTR data (the *Taking Stock* annual reports). The ministers also noted the opportunities for North America to serve as a global leader in the development and use of PRTRs.

While recognizing that individual countries will design PRTRs to meet their own needs and capacities, Council Resolution 00-07 sets forth a set of basic elements considered central to the effectiveness of PRTR systems, which include:

- reporting on individual substances;
- facility-specific reporting;
- multi-media reporting (i.e., releases to air, water, land and underground injection and transfers to other locations

- for further management);
- mandatory reporting;
- periodic reporting (e.g., annually);
- public disclosure of reported data on a facility- and chemical-specific basis;
- standardized database structure to facilitate electronic reporting, collection, analysis and dissemination;
- limited data confidentiality and indications of what is held confidential;
- comprehensive scope; and
- mechanism for public feedback for continual improvement of the system.

“Pollutant release and transfer registers (PRTRs) are emerging as one of the most important environmental policy innovations of the past 30 years. They have the potential to strengthen public understanding and knowledge of pollution problems, enhance the accountability of governments and industry to the public for their actions, and promote reductions in the generation and release into the environment of hazardous and toxic substances.” — Mark Winfield, Director of Research, Canadian Institute for Environmental Law and Policy (CIELAP), excerpt from paper delivered at the OECD International Conference on PRTRs, Tokyo, September 1998.

These national programs receive impetus from *Agenda 21*, signed at the 1992 United Nations Conference on Environment and Development (“Earth Summit”), which included a call for the establishment of pollutant emission registries worldwide, and promoted the principle of community and worker right-to-know. In a further development, a 1996 Council Recommendation from the Organization for Economic Co-operation and Development (OECD) called upon its member countries to consider the establishment of publicly accessible PRTRs.

What Gets Measured Gets Managed: Tracking Substances at the Facility Level

Under a typical PRTR system, facilities report the amounts of individual chemicals released to the environment on-site and the amounts that are transferred off-site to

Putting PRTR Data to Work

The first step—understanding the limitations

When seeking information on sources and potential impacts of industrial pollution, PRTRs can provide an important piece of the picture. However, like any system, PRTRs do have their limitations.

Considering the thousands of chemicals in commerce, PRTRs track only a small subset of potentially harmful substances. In addition, some common air pollutants, such as sulfur oxides and particulate matter, and greenhouse gases such as carbon dioxide and methane, are not currently included in the matched North American data set.

Similarly, not all sources of toxic chemicals are covered. Pollutants emitted by cars and trucks, for example, are typically not included. Nor are natural sources, agricultural activities and small sources such as dry cleaners and gas stations.

PRTR data and risk

PRTR data are estimates of the amounts of substances that facilities release on-site to air, water and land or send off-site for further management during a given year. But the numbers alone cannot tell us whether or to what extent human or ecosystem populations have been exposed to those substances. In addition, the chemicals themselves have differing toxicities and other hazardous characteristics. For these reasons, PRTR data alone cannot tell us what level of risk the releases and transfers pose to health or the environment. However, when taken together with other relevant information, they constitute an important starting point.

PRTRs and community action

Throughout North America citizens are meeting with local industries to talk about improving public safety and environmental quality. In these settings, PRTR data provide both the plant managers and citizens with concrete information, which can serve as the basis for questions and verifying environmental performance from year to year.

disposal or treatment facilities. On-site releases include air emissions, discharges to surface waters, on-site land treatment and/or disposal, and underground injection (disposal of liquid waste into deep wells in known geologic formations). Off-site transfers include discharges to sewer systems and transport to off-site treatment, recycling and disposal centers.

From the early days of the US TRI program....

“The initial demand for environmental reporting came from the public. But in responding, we have discovered that the information is extremely useful to our own management. We have learned from our successes, our inadequacies and the gaps in our knowledge. It’s a good example of the way in which external pressures ultimately prove the benefit both to the environment and to industry.”

— Ciba Geigy, Corporate Environment Report, 1993.

Following the maxim “what gets measured gets managed” many industrial facilities find that the pollutant tracking required by a PRTR helps them to uncover opportunities to reduce the amounts of toxic chemicals used and generated by their activities. Such reductions can represent significant savings to the company, by reducing the amount of process chemicals or other inputs used, and by lowering their waste management costs. Prevention also avoids shifting pollutants from one medium to another in a toxic “shell game.”

Experiences have shown that taking a preventive approach to pollutant management is often the most effective way to reduce the total amount of toxic substances (both releases and transfers) reported to the PRTR. Indeed, for many observers, the major value of the PRTR is the incentive it creates within industry to pursue pollution prevention approaches.

Canada’s National Pollutant Release Inventory (NPRI)

The National Pollutant Release Inventory, managed by Environment Canada, has been operating since 1993. NPRI was established with the help of a multi-stakeholder advisory committee, which included representatives of industry, environmental and labor organizations, and the provincial and federal governments. Facilities in nearly all industrial sectors are required to report to NPRI, and as of the 2000 reporting year the program covers 268 chemical substances. The 1999 renewal of the Canadian Environmental Protection Act reinforced the NPRI program by enshrining mandatory reporting and the publication of an annual report. Users can access the searchable online Canadian database at www.ec.gc.ca/pdb/npri.

The US Toxics Release Inventory (TRI)

In 1986, the United States passed the Emergency Planning and Community Right-to-Know Act, through which the Toxics Release Inventory (TRI) was created. The US TRI collects information from industrial facilities on almost 650 chemicals. While the original legislation targeted manufacturing, other industrial sectors, including metal mines, coal mines, electricity generating facilities, hazardous waste management facilities, solvent recovery facilities, chemical wholesalers, and petroleum bulk terminals, are now covered as well. The inventory is available online, allowing users to retrieve information specific to a facility, geographic area, and/or toxic substance (www.epa.gov/tri).

Mexico’s Registro de Emisiones y Transferencia de Contaminantes (RETC)

The national PRTR in Mexico, the *Registro de Emisiones y Transferencia de Contaminantes* (RETC), is based on information included in one section of an integrated industry reporting and permitting form, the Annual Certificate of Operation (*Cédula de Operación Anual*—COA). The National Institute of Ecology (*Instituto Nacional de Ecología*—INE) is the federal authority in charge of COA data and the RETC program. The first year of RETC reporting was 1997. Mexico has established its RETC reporting list, which includes some 110 substances. Facilities in the 11 industrial sectors under federal jurisdiction may elect to report under the currently voluntary RETC program. Information on the national Mexican program and related activities can be found at www.ine.gob.mx/dggia/retc/ingles/ingles.html.