

ADDRESSING INDUSTRY CONCERNS RELATED TO POLLUTANT RELEASE AND TRANSFER REGISTERS

2020 | Series 5

Welcome to UNITAR's Guidance Series for Implementing a National Pollutant Release and Transfer Register (PRTR) Design Project

Based on the lessons learned through ongoing activities supporting PRTR development worldwide, UNITAR has developed the following documents in a guidance series intended to facilitate the design and implementation of Pollutant Release and Transfer Registers (PRTRs):

- Implementing a National PRTR Design Project: A Guidance Document
- Series 1: Preparing a National PRTR Infrastructure Assessment
- Series 2: Designing the Key Features of a National PRTR System
- Series 3: Implementing a PRTR Pilot Reporting
- Series 4: Structuring a National PRTR Proposal
- **Series 5: Addressing Industry Concerns Related to PRTRs**
- Series 6: Guidance for Facilities on PRTR Data Estimation and Reporting
- Series 7: Guidance on Estimating Non-Point Source Emissions

To access **additional resources** on various aspects of PRTR design and implementation, see:



UNITAR's PRTR Platform highlights the activities of the UNITAR Chemicals and Waste Management Programme in support of the implementation of PRTRs. The site includes a library of Resources from UNITAR and other international organizations focused on supporting the development of PRTRs. The PRTR Platform also provides access to video training modules on different aspects of the development and implementation of national PRTRs through PRTR:Learn <http://prtr.unitar.org>

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List of Acronyms

CIAC	Chemistry Industry Association of Canada
ECCC	Environment and Climate Change Canada
NCT	National Coordinating Team
NPRI	National Pollutant Release Inventory
PRTR	Pollutant Release and Transfer Register
TRI	Toxic Release Inventory
UNECE	United Nations Economic Commission for Europe
UNITAR	United Nations Institute for Training and Research
US EPA	U.S. Environmental Protection Agency

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Introduction

As countries navigate the process of designing and implementing a Pollutant Release and Transfer Register (PRTR) programme, they inevitably will encounter questions regarding the implications of PRTR reporting for industry. To assist countries with these types of inquiries, this document presents approaches to address the most common concerns related to PRTRs from the perspective of industry. Drawing upon experiences in countries with existing PRTR programmes, this document describes actions that have been taken by both government and industry to avoid, address or minimize each of these concerns and provides some practical guidance based on lessons learned.

The five areas of concern related to PRTRs addressed in this document are:

- 1) How will a company know whether it needs to report ?
- 2) How will a company obtain and compile the required PRTR data?
- 3) Will making the data public harm a company's competitiveness?
- 4) How can misinterpretation and misuse of the data be avoided?
- 5) What resource burden will reporting place on a company?

For each of these questions, the guidance:

- **Describes** the concern and the reasons for it;
- **Explains** how the concern has been handled, using examples of actions taken by industry and government; and
- **Analyses** the extent to which the concern was substantiated, overcome, or mitigated.

The concerns addressed in this document were identified based on input from industrial and governmental representatives regarding the implementation phase of various PRTRs and on published research about PRTR implementation. Thus, the document focuses primarily on the roles of government and industry. The views of other stakeholders, such as communities and advocacy groups, research and consulting groups and professional organizations are covered in much less detail.

The information in this document draws on the experiences of existing PRTR programmes. The reader should bear in mind that the guidance and strategies described in the document should be tailored to each country's specific circumstances including level of industrial development, regulatory climate and political, social and economic priorities.

HOW WILL A COMPANY KNOW WHETHER IT NEEDS TO REPORT?



2 — How will a company know whether it needs to report ?

2.1 THE CONCERN

Uncertainty about how PRTR reporting requirements apply to them is one cause for concern among industrial facilities.

Uncertainty about whether PRTR reporting requirements apply to industrial operations is a concern of facility managers and their corporate organizations, particularly when a PRTR programme is proposed or first introduced. This concern may stem from a lack of familiarity with the reporting criteria and/or uncertainty about how to determine whether a facility meets the criteria. In some cases, companies may not be aware of all of the chemicals they use (such as those in purchased products) and thus may not know definitively if they need to report. In other cases, companies may be confused by differences between the PRTR and other reporting requirements. As an example, Box 1 illustrates a situation where a facility failed to report to a mandatory PRTR.

2.2 ADDRESSING THE CONCERN

Governments have addressed the need to assist companies in determining whether they need to report in two ways: through the design of the PRTR system and by conducting outreach.

Governments have addressed the need to assist companies in determining whether they need to report under a PRTR in two ways: through clear and documented design of the PRTR reporting criteria and by conducting outreach to facilities that might be required to report.

In designing their PRTR programmes, countries define reporting criteria in different ways. Usually the thresholds for reporting include some combination of facility size and the types and amounts of chemicals used or released. In Canada and the United States, companies report on all chemicals listed by the PRTR for which their annual use exceeds a specified threshold quantity. However, Canada starts from the presumption that facilities in all sectors must report and then lists exemptions. Canada also requires facilities engaged in specific activities to report for certain chemicals, regardless of quantities used.¹ The United States, in contrast, lists the specific industrial sectors that are included. Japan lists the sectors required to report if a threshold is exceeded and facilities in certain sectors identified by the PRTR programme must report regardless of the amount of the chemical handled.

¹ <https://cdxnodengn.epa.gov/cdx-tri-threshold-screening-tool/action/home#!/>

For each PRTR, uncertainty about reporting obligations is reduced when the programme provides clear guidance on the reporting criteria through guidance documents, flow charts, or reporting tools. For example, the U.S. provides an online screening tool for facilities to determine if they need to report. The tool prompts the user to enter information about the facility's sector of operation, employment and materials handled at the facility that are or that contain reportable chemicals. Once the facility's screening information is entered, the tool outputs a list of chemicals for which reporting is required. Canada produces a biennial Guide for Reporting to the National Pollutant Release Inventory (NPRI), which helps facilities determine whether they are required to submit a report to the NPRI.²

BOX 1: UNDERSTANDING PRTR REPORTING REQUIREMENTS: AN EXAMPLE FROM THE US TRI

A small metal working facility in the U.S. did not submit Toxics Release Inventory (TRI) reporting forms to the U.S. Environmental Protection Agency (U.S. EPA) because company personnel mistakenly believed that the facility did not meet TRI reporting requirements. Later, the company hired a consultant to conduct a facility-wide environmental review. During that review, the consultant determined that the company was delinquent in its TRI filing. A company official explained the confusion over reporting requirements: The facility had viewed the reporting requirements for a state-level environmental reporting programme and found they did not meet the reporting criteria. Subsequently, the facility had assumed the reporting criteria were the same for TRI and that they did not need to report. For the state programme, however, reporting was based on the maximum quantity of listed chemicals existing on-site, while the PRTR criteria were based on a year's total use. Under the TRI requirements, the facility was required to report for three chemicals.

Once the company was aware that it was delinquent in filing, personnel took steps to alert U.S. EPA to the problem and file the necessary forms, although after the reporting deadline. The company used the U.S. EPA's Audit Policy which provides incentives for regulated facilities to voluntarily discover and fix violations of national environmental law and regulations. Because the facility met all of the criteria of the audit policy, there was no fine associated with their non-compliance.

Although the company accepts responsibility for its failure to report, the company official believes that the confusion could have been avoided if the state and U.S. EPA had conducted outreach to inform facilities of how reporting criteria differed between the two state and federal programmes.

² <http://publications.gc.ca/site/eng/9.506026/publication.html>

Outreach and awareness-raising is another important approach used by government to address industry's concerns regarding PRTR reporting requirements. Countries have used a wide range of methods to inform companies whether or not they need to report. For most industrial facilities, the PRTR programme's website is the primary source of information on reporting requirements, guidance and tools, in one central location. The website should also include a way for facilities to ask questions on the PRTR programme. Ideally, the site would provide both an online question and answer function where users can submit questions, and a searchable archive of Frequently Asked Questions. Facilities often have similar questions and can pick up critical knowledge quickly from reviewing published questions others have asked along with the PRTR programme's responses.

Most of the recently developed PRTRs also provide training workshops and other forms of compliance assistance for industry in the early years of the programme. The U.S. EPA hosted free training workshops annually for the first 20 years of the TRI Program. These workshops were initially in-person sessions held in locations throughout the country, but as technology evolved, online webinars with a live trainer (rather than a recorded session) became a cost-effective and efficacious way to transfer knowledge about PRTR programme requirements. The online training model allowed the U.S. EPA to reach facilities throughout the country without the time and expense of in-person sessions.

To target their initial outreach efforts, the United States used data available from a private-sector database on business entities, Dun and Bradstreet, to identify facilities that might be subject to TRI reporting, namely those in the manufacturing sector with more than 10 employees. Once potential reporting facilities were identified, the U.S. EPA conducted outreach activities directly to these establishments: informing them of the reporting requirements, directing them to guidance materials; and inviting them to TRI training workshops. U.S. state environmental programmes also took steps to ensure that facilities were aware of TRI reporting requirements. Box 2 describes the type of outreach conducted by U.S. EPA Region 2 and the State of New Jersey's Department of Environmental Protection to inform industry of TRI reporting requirements.

Environment and Climate Change Canada (ECCC) conducted direct outreach activities when their PRTR was established and also had the assistance of industry associations in publicizing NPRI reporting. ECCC worked with industry stakeholders and other government departments and used existing emission databases to establish a list of facilities that were likely to be required to report. Guidance and reporting forms (electronic and paper) were then mailed to facilities. Similar to the U.S., in-person information sessions were hosted by ECCC across Canada for industry each year from 1998 to 2007, when online interactive sessions replaced in-person sessions.

ECCC continues to conduct annual compliance promotion activities, identifying facilities that do not report, but that may be subject to reporting requirements and contacts those facilities to determine their reporting status. In addition, ECCC now produces a series of online video tutorials that are available on demand³, which are a cost-effective measure to replace the in-person sessions and reach a wider audience.

³ <https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/instructional-videos.html>

ECCC also maintains an NPRI Helpdesk and facilities can contact NPRI staff for help by calling a toll-free number or by email. Questions are answered within a three-day service standard. The Helpdesk is generally busiest during the month of May, in advance of the June 1st reporting deadline, whereby questions are typically answered by phone and email within the same business day. The number of requests varies depending on whether there are significant changes to reporting requirements or the reporting software.

Building upon lessons learned can be an important part of effective outreach. Documenting, compiling and publishing common questions the programme receives, whether via a telephone help-line or submitted online, is a valuable resource to industry and to the government as well. Having resources such as a compilation of organized questions and clear responses helps facilities understand the requirements and helps the government to respond consistently to inquiries. The questions posed by industry are important feedback for the PRTR programme from which they can continually refine the information provided to meet industry's needs. For example, the U.S. EPA developed a Questions & Answers document with responses to over 700 of industry's questions.

Box 2: The Early Stages of TRI— Federal, Regional and State Actions to Raise Awareness of Reporting Requirements

At the beginning of the Toxics Release Inventory (TRI) programme in the United States, U.S. EPA mailed brochures to facilities in the manufacturing sector with more than 10 employees. The agency used the Dun and Bradstreet company/facility database to identify facilities and to retrieve mail addresses. The brochure described the TRI reporting requirements, including which facilities needed to report, the list of reportable chemicals and other important information.

Individual states and U.S. EPA regional offices were also responsible for publicizing the reporting requirements and answering facilities' questions. For example, the State of New Jersey sent TRI reporting information to all manufacturing facilities in the state that had more than 10 employees, using the state's Department of Labour database to identify candidate facilities. During the reporting period, U.S. EPA regional offices also held workshops on TRI reporting requirements.

Follow-up with both non-reporters and reporting facilities has proven to be an important activity to ensure that facilities understand PRTR reporting requirements. Even decades after the TRI began, U.S. EPA continues to answer basic reporting questions from facilities. Many of these questions are about reporting criteria — which chemicals are on the TRI list and whether particular facilities meet TRI reporting requirements — rather than questions related to estimation of releases and transfers.

⁴ https://ofmpub.epa.gov/apex/guideme_ext/guideme_ext/guideme/file/1998qa.pdf

2.3 THE RESULTS

Experiences in countries have shown that effective outreach and clear thresholds can help to avoid confusion.

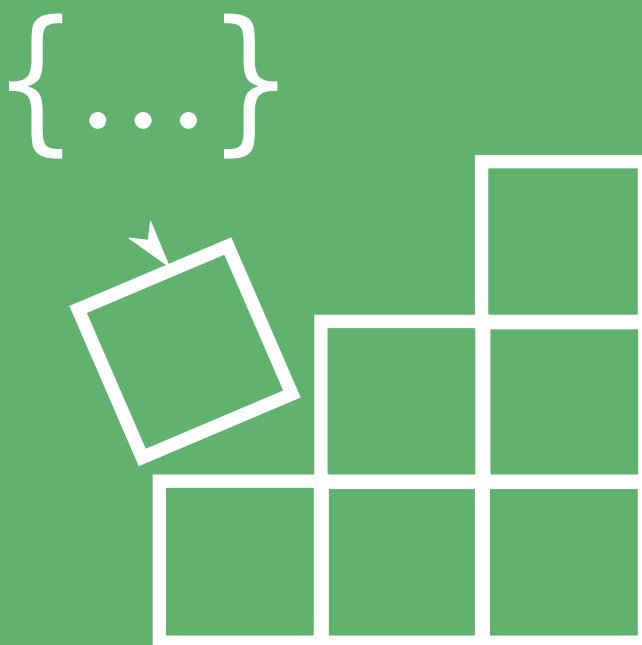
As countries begin implementing a new PRTR, they find it challenging to ensure that industry understands the PRTR reporting requirements. Nevertheless, experience has shown that clear reporting criteria and effective outreach can reduce confusion. Clear, concise reporting guidance documents are crucial, particularly for smaller companies, with fewer staff. The relationship of PRTR reporting to other reporting requirements must also be made clear. Some PRTRs do this by using the implementation of the PRTR as an opportunity to consolidate environmental reporting requirements, which simplifies reporting for facilities. For example, Chile implemented “single window” reporting that consolidated existing environmental reporting requirements with those of the PRTR in one electronic reporting system.

Another example is Canada’s Single Window Information Manager (SWIM) which serves as the “front door” to many reporting programs and provides a way of connecting individual users to these programs. Launched in 2010, it first addressed the data collection needs for the NPRI, the Federal Greenhouse Gas Reporting Program, and greenhouse gas reporting for four provinces. Since then, it has expanded to provide reporting to 29 federal, provincial and industrial association programs. Single Window is designed to minimize duplication and reduce reporting burden for industry. It provides streamlined access to reporting and is adaptable to changes in reporting requirements. The program reduces the reporting burden for industry and government in three ways:

- Tombstone information: Users only provide their administrative information once for all programs;
- Data is carried over from another program or from another year as necessary; and,
- Regulatory Reporting Requirements are harmonized: only one module can be used to report to many programs.

At the core of a PRTR outreach strategy is the development of a comprehensive and well-organized PRTR webpage with detailed, clear content. The webpage should provide ready access to guidance on the PRTR reporting requirements and any tools that could assist facilities in determining if they need to report. PRTR programmes have also invested significant efforts at the start of the programme contacting potential reporting facilities directly after identifying them via business databases, state and local government contacts, trade associations and/or lists of facilities regulated under the country’s other environmental programmes. If this direct outreach proves successful, it may need to be repeated in subsequent years, since companies are constantly changing their operations and staff and new facilities come on line every year.

HOW WILL A COMPANY OBTAIN AND COMPILE THE REQUIRED PRTR DATA?



3

How will a company obtain and compile the required PRTR data ?

3.1 THE CONCERN

Collecting the various types of data needed for PRTR reporting can be a challenge for facilities, particularly at the beginning.

RTRs require facilities to report data to a governmental agency on the amounts of listed chemicals that they release to air, water and land or transfer to waste management facilities. The information reported by facilities may be either measured or estimated based on readily available data from, for example, production levels, standard emission factors and other engineering calculations. Some PRTR programmes also require additional information, such as on waste management practices or pollution prevention activities.

Collecting the various types of data needed for PRTR reporting can be a challenge for facilities, particularly at the beginning when staff are not familiar with the PRTR requirements. In many cases, small and medium-sized companies will not have previously collected all of the necessary data.

Many smaller companies could be initially unsure how to collect or estimate the data needed to report. They might lack both the appropriate expertise and the specific knowledge about how to obtain the data and keep the records. For example, a small manufacturing facility may not have staff that are familiar with assessing the chemical constituents of products or materials.

Larger companies often collect some of the data being requested by PRTRs, but may not have experience with compiling annual estimates at the facility level as is required for PRTR reporting. At the start of PRTR reporting in the United States, the larger firms usually knew how to collect the data needed for TRI reporting, but found that communication among their own operating groups, which is necessary for compiling PRTR data for the entire facility, can present a challenge.

Given this lack of experience with PRTR reporting, some companies were concerned that they would be vulnerable to governmental enforcement action if their data estimates led to inaccurate reporting.

3.2 ADDRESSING THE CONCERN

Governments have addressed the need to assist companies in determining whether they need to report in two ways: through the design of the PRTR system and by conducting outreach.

At the facility level, record keeping provides the foundation for collecting and reporting PRTR data. Companies find that the most useful first step is to develop a system to track three kinds of records for PRTR listed chemicals:

- Safety data sheets;
- Purchasing and vending orders; and
- Data on production and manufacturing usage and manufacture.

Some facilities already have or purchase chemical management software where information on the chemicals entering the facility and those manufactured are tracked. Ideally, the chemical management system is integrated with key inputs such as purchasing, production and inventory data. Alternatively, facilities develop their own system, such as through spreadsheets shared with production and purchasing personnel, to systemize and centralize the entry and storage of this information. Acquiring such chemical and production information in real time is always a more efficient approach than compiling the data months later. If these data compiled from throughout the facility are shared and stored digitally, regular (e.g., monthly) updates can be carried out with minimal effort.

The small tool manufacturing company mentioned above lacked the expertise to assess the amount of chromium in the steel used in its manufacturing processes — information it needed to estimate its PRTR data. The company first contacted the vendor of the steel. Through the vendor, the company located the supplier who was able to provide the needed information about chromium levels in the steel. The company now maintains records of purchasing, vending and shipping orders, as well as safety data sheets, as the basis for its PRTR reporting.

Larger companies often have both the relevant expertise and data systems needed for PRTR reporting. For them, the task is largely organizational. It requires building stronger links among a company's divisions through better coordination and clearer designation of responsibility. In general, the responsibility for PRTR reporting should not be assigned only to the environmental, health and safety programme and staff. Reporting for a PRTR also requires help from production/manufacturing, purchasing, accounting, engineering and technical systems departments. One company, for instance, built a more centralized chemicals management system. It delegated chemical purchasing responsibility to just a few people, leading to stricter management of chemical use.

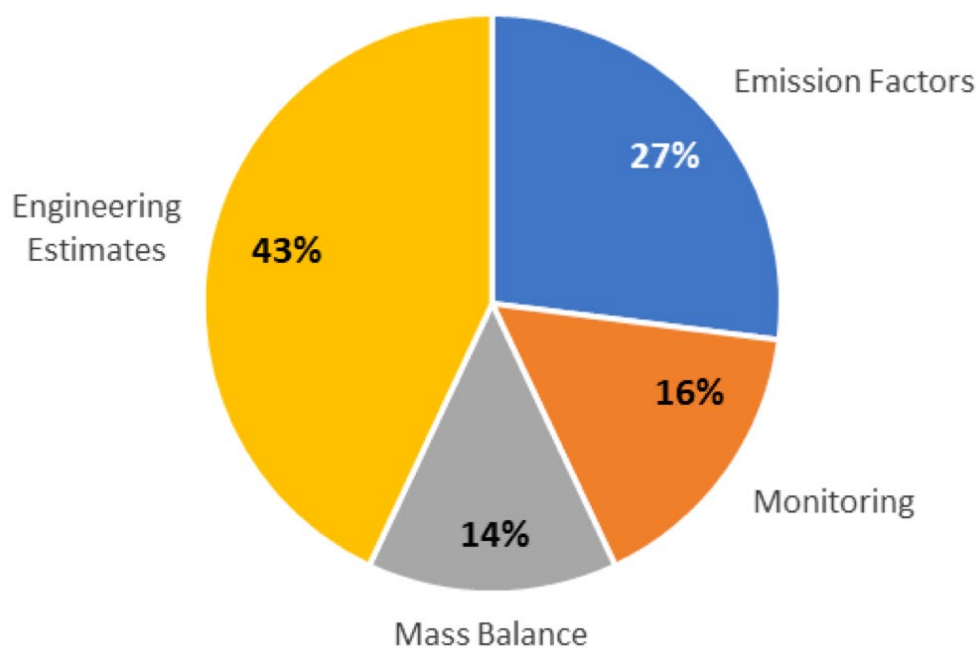
Not just environmental, health and safety programmes needed to participate. Reporting for a PRTR also requires help from production/manufacturing, purchasing, accounting, engineering and technical systems departments.

Industry associations can provide useful services to ensure that companies are able to collect and estimate PRTR data. The pulp and paper industry in both the United States and Canada was extremely active in advising its members on PRTR reporting. Their contributions included researching the literature for emissions data, conducting in-plant studies and holding training workshops.

Industry associations can provide useful services to ensure that companies are able to collect and estimate PRTR data.

Governments have used several approaches to address industry's concerns about obtaining the data needed to report under a PRTR programme. The U.S. EPA issued general and industry-specific guidance documents clarifying what types of data are needed, listing default emissions factors and providing sample calculations. The general guidance calls for using site-specific measured data when available and mass-balance or engineering estimates when measured data are not available. For the U.S. PRTR, companies must indicate on the reporting form the basis (e.g., derived from monitoring data, mass balance) of each quantitative estimate. For the 2016 TRI, 27% of the mass of the releases reported were based on emission factors, 16% used measurements, 14% used mass balance and the rest were based on other methods, such as engineering calculations. At the start of TRI reporting, few estimates (only 4%) were based on emission factors. With the increase in published emission factors from U. S. EPA and other sources, the use of emissions factors has increased to become a predominant estimation method for on-site releases.

Figure 1: Release estimation methods used for 2016 U.S. TRI



In Canada, the NPRI has developed both general and industry specific guidance and tools to assist facilities in estimating releases, which are available online in the NPRI Toolbox⁵. The Toolbox includes guidance developed by ECCC (e.g., Criteria air contaminants technical source guide for reporting to the National Pollutant Release Inventory⁶), developed in partnership between ECCC

⁵ <https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/report/sector-specific-tools-calculate-emissions.html>

⁶ <http://publications.gc.ca/site/eng/243272/publication.html#>

and industry associations (e.g., Emission estimate guide for primary aluminium producers⁷) and developed by industry associations (e.g., A Recommended Approach to Completing the National Pollutant Release Inventory for the Upstream Oil and Gas Industry⁸). The Toolbox also includes calculation examples and calculation tools that can be downloaded and used by industry to estimate releases.

Some governments have developed tools to assist facilities with their PRTR release estimates. For example, in Japan, the government developed a simple tool for retail fuel facilities to estimate releases based on input data that they already track for business reasons, such as fuel quantities and fuel type.

3.3 THE RESULTS

Industry managers and governmental officials in countries with operating PRTRs stress that it takes time to learn how to obtain the necessary data, how best to manage the records and how to report the data. Expect that there will be a learning curve.

Industry managers and governmental officials in countries with operating PRTRs stress that it takes time to learn how to obtain the necessary data, how best to manage the information and how to report the data. There is a learning curve. The quality of TRI numbers for the first year of reporting in the United States were poor mostly because companies were unfamiliar with what data needed to be reported and unsure how to obtain, estimate, or monitor annual release and transfer values.

PRTR reporting schemes in countries like the United States, which rely largely on estimates rather than monitored data, show that the accuracy of the data improves as the reporting industries gain experience. Although most reports under the U.S. TRI are estimates rather than precisely determined quantities, this has had little impact on the usefulness of the data because decisions and conclusions based on the data are usually not sensitive to the uncertainties in the estimates. Studies by U.S. EPA in the first five years of the programme, determined that aggregated release estimates were within four percent of estimates made by independent engineers.

A limited number of large volume facilities, chemicals, industries and geographic areas tend to dominate the totals when PRTR quantity data are aggregated. More precise estimates are unlikely to change this situation substantially. The uncertainties in estimation thus have not been as much of a problem as some expected when the U.S. TRI was established. Companies are expected to do what is practical to obtain the data; the data can also be corrected or improved by monitoring

⁵ <https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/report/sector-specific-tools-calculate-emissions.html>

⁶ <http://publications.gc.ca/site/eng/243272/publication.html#>

particular points of uncertainty at a later time.

Although some small facilities initially may have had trouble compiling their data, it has been the experience of Canadian chemical producers that these facilities currently have little trouble compiling their reports. According to an industry official with the Chemistry Industry Association of Canada (CIAC), facilities with environmental management systems in place should not have difficulty assembling release and transfer data for PRTRs.

Some companies find that there are additional benefits of setting up data-tracking systems for chemical release and/or use. For instance, because of its reported data, a small boat manufacturer in the United States optimized its use of chemicals by reducing its number of waste streams, which also led to a reduction in the time spent reporting. Reviewing chemical use and waste management practices can help to reduce costs of raw materials and waste management and improve protection of workers from potential health effects.



Photo by Brett Sayles from Pexels

WILL MAKING DATA PUBLIC HARM A COMPANY'S COMPETITIVENESS?



4 Will Making Data Public Harm A Company's Competitiveness?

An often-cited concern among industry is that PRTR reporting will disclose confidential data that might damage their competitiveness.

An often-cited concern among industry is that PRTR reporting will disclose confidential data that might damage their competitiveness. Any data disclosure that reveals information about market share, manufacturing capacity, product formulation, the marginal cost of production, or business plans could affect a company's ability to compete.

Companies in all countries with PRTRs express this concern. A representative of a chemical manufacturer's trade association explained that when companies invest significant capital in developing a new process or product, corporate officials fear that any reporting scheme may lead to the release of proprietary information.

4.1 THE CONCERN

The competitiveness concern is usually expressed about data related to production processes and products, not about emissions data. Precise data on the amounts of chemicals entering and leaving a plant could seriously affect competition. Information on production levels could potentially enable competitors to calculate price margins and displace market share. Requiring throughput data can place an unfair burden on facilities in terms of resources and their ability to remain competitive.

4.2 ADDRESSING THE CONCERN



Photo by JESHOOOTS.com from Pexels

Recognizing industry's concern about potential damage to competitiveness, governments have designed PRTRs to allow companies an opportunity to protect data they view as confidential.

Recognizing industry's concern about potential damage to competitiveness, governments have designed PRTRs to minimize this potential issue. Typically, PRTRs do not collect data on production volumes, which is considered confidential information by many facilities. Most PRTRs also allow companies an opportunity to protect data they view as confidential. In general, this entails substituting a generic identity in place of a specific chemical substances when making the data publicly available and establishing security measures to protect confidential data that is submitted to the PRTR. For example, Article 12 of the Kiev Protocol on PRTRs addresses confidentiality stating that each Party may authorize that certain information can be held confidential when there would be an adverse effect if disclosed publicly. The types of adverse effects listed include impacts on: international relations, national defence or public security; the course of justice (e.g., the ability of a public authority to conduct an enquiry of a criminal or disciplinary nature); commercial and industrial information where confidentiality is protected by law to protect a legitimate economic interest; intellectual property rights; or personal data. In the United States, a facility requesting protection of information it considers to be confidential is required to justify its request: misuse of confidential business information claims carries a significant financial penalty, ensuring that companies think carefully about the need for protection and helps deter frivolous claims. If a confidential business information claim is granted, a generic identity replaces the specific identity of the chemical in the published TRI. In the U.S., few facilities claim the trade secret exemption. In 2016, only 10 trade secret claims were submitted and granted out of more than 80,000 forms submitted.

In Canada, sections 51-53 of the Canadian Environmental Protection Act, 1999 (CEPA), the NPRI's enabling statute, address the possible need for confidentiality⁹. Facilities are permitted to submit a written request to treat the information in their report as confidential. The request may only be based on any of the following reasons:

(a) the information constitutes a trade secret;

(b) the disclosure of the information would likely cause material financial loss to, or prejudice to the competitive position of the company; and

(c) the disclosure of the information would likely interfere with contractual or other negotiations being conducted by the company.

CEPA also allows ECCC to contact the facility for additional justification if the initial request is found not to provide enough justification. If the confidentiality claim is granted, the data will not be made publicly available.

4.3 THE RESULTS

Experience shows that few confidentiality claims are made by industry in reporting PRTR data and that the claims cover minuscule percentages of the volume reported.

The experience of existing PRTR programmes shows that few confidentiality claims are made by industry when reporting PRTR data and that the claims cover low percentages of the volume reported. No example of damage to competitiveness following the publication of PRTR data has been documented.

However, concern about the potential for damage remains when countries engage industry in designing and implementing new PRTRs.

Company experience with existing PRTRs ranges from finding protection of trade secrets effective, to finding no need to make claims, to finding reasons for continuing concern about the potential for damage to competitiveness. Primarily, companies want to protect the proprietary information on their production levels. Many governments have responded to this concern by limiting the PRTR information collected to releases and transfers data and do not collect information on production levels, or on the quantities of chemicals used at the facility. In the 1990s, PRTRs were operational in only a handful of countries. Companies in these countries were concerned they would be at a competitive disadvantage because their PRTR data would be public, but their international competitors would not be required to report/disclose similar information if no PRTR was in place in the countries where they operated. The fact that, nowadays, PRTRs have been implemented in almost all industrialized countries as well as in many developing countries, has reduced this concern.

In the U.S. and Canada, confidentiality claims submitted by companies and approved by regulatory agencies for schemes that cover release and transfer data are well below 1 percent of the total forms submitted.

HOW CAN MISINTERPRETATION AND MISUSE OF THE DATA BE AVOIDED?



5

How can misinterpretation and misuse of the data be avoided?

5.1 THE CONCERN

Companies are concerned that the users of the data will not have the knowledge or capacity to fully understand the nuances of the data submitted to a PRTR.

Companies may fear that information about the identities and quantities of the chemicals they use and release to the environment will be misinterpreted and misused. They are concerned that the users of the data will not have the knowledge or capacity to fully understand the context of PRTR data. They also fear that some groups might use the data in a campaign that could damage a company's image or goodwill and therefore its business.

In terms of misinterpretation of PRTR data, industry representatives have voiced the following concerns:

users of the PRTR data may equate the amounts of releases with actual or potential health risks; they may focus on the quantity of emissions and thus, in some cases, overestimate the potential impact;

users may not consider the quantities of release in relation to levels of production, thus larger producers that come out at the top of lists of the largest sources of pollution may be judged unfairly;

users may not distinguish between transfers to off-site waste treatment plants and direct releases to the environment, which are likely to present a more immediate and greater risk; and

users may draw erroneous conclusions from comparing facilities' PRTR data, because they may not recognize that differences in PRTR data may be simply due to different estimation methods used by facilities and that it is not always appropriate to compare facilities' data directly, even for facilities in the same company or industry.

The possibility of PRTR data being used for purposes that may be contrary to a company's interests is another source of industry concern, including:

PRTR data may be used as evidence in a civil or regulatory proceeding, potentially resulting in audits or expensive penalties;

PRTR data may be used in public campaigns that could affect a company's reputation as an environmentally-responsible company; or

PRTR data on use of chemicals may highlight the large quantities of chemicals that are used as raw materials in making other products, potentially leading to efforts to ban or restrict use of these chemicals.

Prior to electronic reporting, industry was also concerned with the impact on their reputation from PRTR data entry errors. With the adoption of electronic reporting, this concern has been minimized as data are entered directly by the facility and reporting software usually includes embedded data quality checks for data inconsistencies and outlier values.

5.2 ADDRESSING THE CONCERN

PRTR data may also be used by industry to demonstrate progress towards environmental management goals.

any companies have addressed concerns about misinterpretation and misuse by taking the initiative. Some companies issue environmental reports in which they present PRTR data along with their own interpretations and analyses. Such reports can provide a baseline, illustrate trends, explain reasons for changes in emissions/transfers and highlight the activities the company has implemented to reduce their chemical waste or releases, which is useful contextual information. PRTR information is commonly included in companies' Sustainability Reports, which also highlight the company's activities to improve environmental, social and economic conditions, thereby providing a more holistic picture of the company's operations and societal impacts.

PRTR data may also be used by industry to demonstrate progress towards environmental management goals. For example, PRTR may be used as an input to corporate sustainability reports, such as those that follow the Global Reporting Initiative¹⁰ reporting standards. Corporate sustain-

ability reporting is now common practice and supports goals similar to those of PRTRs including promoting communications and accountability with the public and protecting the environment.

Some companies have found PRTRs to be a good basis for communicating, both internally across company divisions and externally with a broader range of concerned parties.

Some companies have found that contextualizing PRTR requirements and data to be a good prompt for communicating, both internally across company divisions and externally with a broader range of interested parties. Some PRTRs collect data on facilities' source reduction activities; facilities may submit additional (optional) text describing their pollution prevention efforts. A facility's ongoing efforts to reduce their impact provides important context to the PRTR data on releases. Other companies are working with their customers and suppliers to encourage appropriate use and disposal of products and chemicals, to modify activities and operations that could result in releases and to switch to less toxic materials in their products. For example, electronics manufacturers have worked closely with their customers to move away from lead solder toward lead-free alternatives. For some applications, drop-in replacements were available, while for other products, substantial research and collaboration between the supplier and the customer was required to develop lead-free alternatives that met the performance specifications of the existing product.

Governments have handled the concern of misinterpretation and misuse by taking the lead in publishing, using and interpreting the PRTR data, incorporating PRTR data into national policies and programmes, providing outreach and assistance that give users the tools they need to interpret the data through events, conferences, training and hosting webinars to educate data users.

Governments have taken steps to issue or support the development of reports that put PRTR data in context.

Governments have taken steps to issue or support the development of reports that put PRTR data in context. For example, the European Union publishes a summary of the most recent E-PRTR data¹¹ and the data trends over time, accompanied by interactive graphics and maps¹² for exploration of the data. The U.S. EPA prepares annually a TRI National Analysis¹³, which provides interactive data visualizations accompanied by interpretive text. In addition to providing an overview of the national-level trends in TRI, the TRI National Analysis also provides an interactive map to allow users to explore the TRI data in any location. Through the map, users can retrieve data on a state, a watershed, or any of hundreds of smaller areas. . U.S. EPA also provides advance notification by email to facilities and companies named in their annual TRI National Analysis. ECCC

¹¹ <https://circabc.europa.eu/sd/a/fb8035be-a0b3-4b0f-9de1-58e2c602063f/E-PRTR%20Summary%20Note%202014.pdf>

¹² https://www.eea.europa.eu/data-and-maps/data/data-viewers#c0=20&c5=&b_start=0

¹³ <https://www.epa.gov/trinationalanalysis>

publishes highlights¹⁴ and sector overview¹⁵ reports with NPRI data, maps to explore the NPRI data, user-friendly query tool¹⁶ as well as a Guide for using and interpreting data from the National Pollutant Release Inventory¹⁷.

Another approach taken by governments is to highlight the accomplishments of PRTR-reporting facilities in reducing their releases. This approach provides context to the public and other stakeholders on the PRTR release information by presenting PRTR data with information on industry's efforts to reduce their releases. The U.S. EPA established a voluntary programme for TRI facilities that targeted 17 TRI chemicals for 50% reduction by 1995, using a 1988 baseline. The programme achieved its reduction goal in 1994, one year ahead of schedule. Currently, the U.S. EPA publishes "Pollution Prevention Spotlights" that highlight the accomplishments of specific sectors and facilities. Some government programs also reward facilities making environmental improvements such as through their taxation system. For example, Chile's government passed an environmental tax law with the objective of encouraging a shift to technologies and fuels that will reduce pollutants.

Governments can also develop analytic tools and organize events to help users understand and interpret the data. The U.S. EPA developed the Risk-Screening Environmental Indicators (RSEI) model to help government, researchers and communities explore data on TRI chemical releases from industrial facilities. RSEI incorporates information from TRI on the amount of toxic chemicals released, together with factors such as the chemical's fate and transport through the environment, each chemical's relative toxicity and potential human exposures. The European Union, Canada, Japan, Australia and the U.S. make tools available to explore PRTR data geographically with interactive, online maps.

Governments can provide tools and organize events to help users understand and interpret the data.

Providing ready access to the underlying data allows for multiple analyses to be undertaken by organizations and individuals; diverse analyses can help focus attention on the quality of analyses and interpretation of the data. Most PRTR data are available online so that anyone can check accuracy and identify misinterpretations of published work that uses PRTR data.

¹⁴ <https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/tools-resources-data/fact-sheet.html>

¹⁵ <http://maps.canada.ca/journal/content-en.html?lang=en&appid=59868c2a9bc84c5fa1b8dbc765a6a2f3&appid=986abeafee6f4a1abfa081e7fc1bf2cd>

¹⁶ <https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/tools-resources-data/access.html>

¹⁷ <https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/using-interpreting-data.html>

5.3 THE RESULTS

While PRTR data have the potential to be misunderstood and misused, the problem has not been nearly as severe as first feared.

While PRTR data, like any other data, have the potential to be misunderstood and misused, the problem has not been nearly as severe as first feared. Companies and governments are finding that taking some proactive measures can help minimize misinterpretation and misuse of the data. However, the line between misuse and appropriate use is not a clear one. In some cases, it depends on one's perspective. Some of the concerns such as use of the data in public campaigns are the very end uses that others would argue makes PRTRs such an effective policy tool.

Companies and governments are finding that taking some proactive measures can help minimize misinterpretation and misuse of the data.

Many business leaders acknowledge the role of PRTRs in stimulating attention to chemical use and waste management and driving reductions in releases of chemicals while also recognizing the need to provide context to minimize misinterpretation of the information.

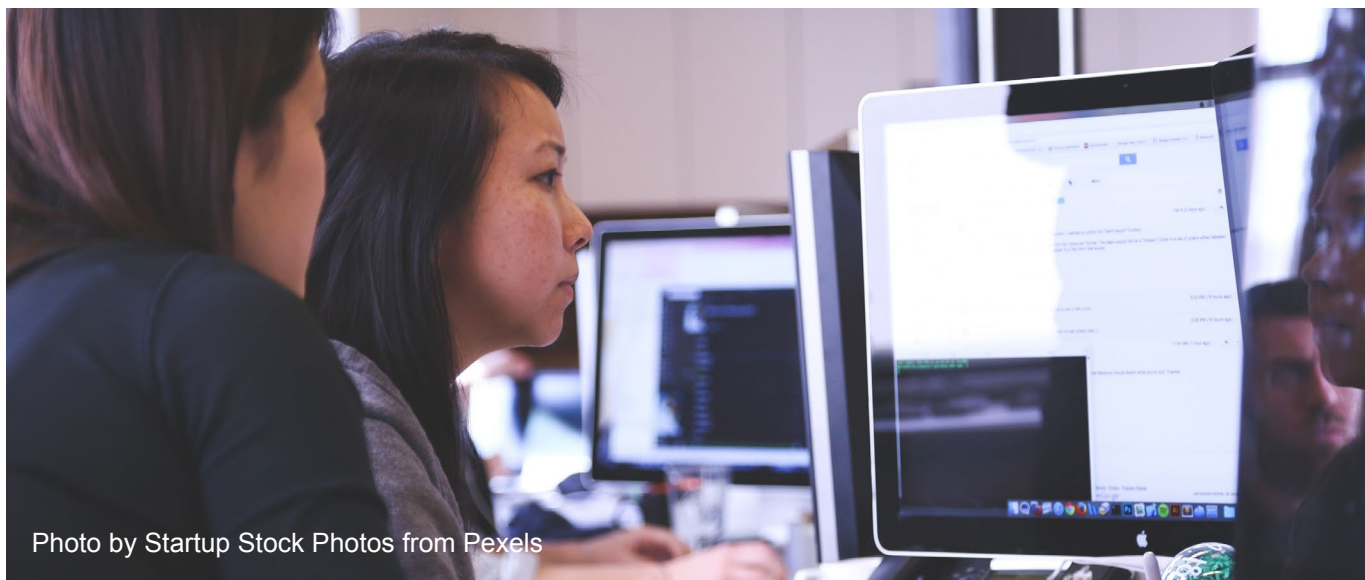
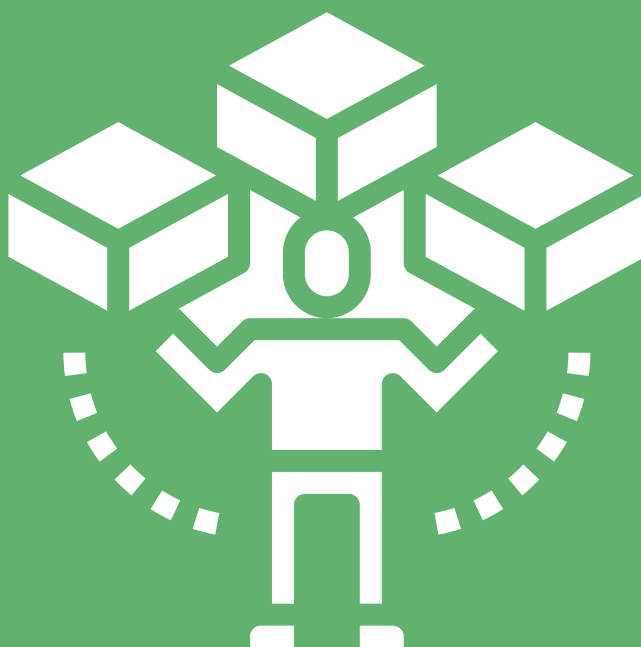


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WHAT RESOURCE BURDEN WILL REPORTING PLACE ON A COMPANY?



6— What resource burden will reporting place on a company ?

6.1 THE CONCERN

In the early phases of implementing a PRTR, companies face a one-time investment of resources to develop the skills and systems to report.

aced with PRTR reporting, industry is often concerned about the burden and costs associated with record-keeping and reporting. The costs, including staff time, associated with PRTR reporting include:

Understanding the reporting requirements and determining whether they apply to the facility;

Identifying the data needed and how they can be obtained;

Obtaining the data by contacting vendors, performing calculations or carrying out monitoring;

Completing the reporting form;

Setting up an internal system to track data from year to year;

Providing in-house training for any of these tasks; and

Obtaining software and/or hardware.

When companies first report to a PRTR, they face a one-time investment of resources to develop the skills and systems to support reporting. Initial costs can be significant for small and medium-sized companies which may need to invest in systems to track chemicals. For larger companies, which are more likely to have a chemical management system in place, PRTRs may add to existing environmental reporting and record keeping requirements. Fewer resources are needed on a continuing basis to operate the information collection system and submit reports.

A few estimates give a sense of the costs to industry of PRTR reporting in the United States. A 2017 analysis estimated that it takes some facility 35.7 hours to complete one standard TRI form for one chemical with a cost of \$1,978. For 2016, one-third of the facilities that reported to TRI submitted one form, while 93% submitted fewer than 10 forms. (U.S. EPA, 2017)

6.2 ADDRESSING THE CONCERN

The first step for most companies has been to assign a person at the facility level to coordinate PRTR reporting.

For most companies, the first step in PRTR reporting has been to assign a person at the facility level to coordinate the effort. Most companies have not needed to hire new personnel. Rather, they have rearranged internal responsibilities. The person designated to handle PRTR reporting varies from company to company. In some cases, it has been the person in charge of environmental compliance. In others, it has been a staff person in waste management, production, or engineering.

Larger companies that already collect information on, for example, process control or worker exposure, have data that can be used in their PRTR submissions and often purchase chemical management software (or add on to existing systems) to develop more comprehensive inventory and information management systems. Consulting and engineering firms and others provide software to assist facilities in setting up such systems. Some smaller companies may use spreadsheets or forms developed for tracking chemical use and releases. Once record keeping and data management systems are developed, they are frequently used by the facility for other business purposes which helps to expand the benefits of the investment.

One approach companies have used to keep the cost of PRTR reporting is to first estimate their releases and then select specific areas in which to collect more information to improve the estimate, such as through measuring or monitoring actual releases. In sequencing data capture over time, facilities are able to gradually improve the accuracy of their data at a reasonable cost.

Governments have attempted to reduce costs by providing training and guidance, offering financial assistance and providing software for electronic reporting.

To reduce the burden on facilities, governments have developed training and guidance materials, and embedded support within the software used for electronic reporting. From 1987 through 2007, the U.S. EPA offered workshops on TRI, which were continually revised as the agency gained a better understanding of industries' concerns. Some companies, for example, found initial U.S. EPA workshops too general. Participants wanted information specific to their industry and processes. The U.S. EPA responded by developing a series of industry-specific guidance documents that included sample calculations and default emissions factors targeted to the sector.

Governments are designing electronic national PRTRs platforms for reporting. Some are developing one platform allowing different type of reporting mandatory within the country such as the "single window" reporting implemented in Chile. When Environment and Climate Change Canada proposed the NPRI reporting form, members of the Chemistry Industry Association of Canada (CIAC) noted its similarity to the form that member companies submit to the organization each year. The NPRI staff decided to use and build upon the software that CIAC had already developed, so that CIAC members could produce their NPRI and CIAC reports with the same data and software. Information reported to the industry association and to NPRI is now submitted in one report through NPRI's online reporting system. In the United States, the TRI online reporting system allows facilities to upload their data files from their own or purchased software if it meets the U.S. EPA's electronic data structure specifications.

Organizations outside of government have also provided assistance to help minimize the reporting burden for facilities. For example, trade associations in the United States have worked with U.S. EPA to determine how best to provide their member companies with sector specific guidance materials and training. Other groups, such as consultants, law firms, professional training organizations and environmental groups also offer training and assistance.

6.3 THE RESULTS

Many companies find that the costs are at least partially offset by benefits which go beyond the improvement of systems for tracking chemicals, such as savings achieved through source reduction.

PRTR reporting is likely to require facilities to expend additional resources, at least at first. For smaller companies, resources and expertise are needed to acquire, process and submit PRTR data. For larger companies, much of the cost is associated with the need to coordinate and compile data that may be scattered throughout the company. While some companies emphasize the burden of these costs, others have found the cost of maintaining a tracking system to be trivial.

Many companies find that the costs are at least partially offset by benefits which go beyond the improvement of systems for tracking chemicals, such as cost savings and reduced liability achieved through source reduction.

CONCLUSIONS



7 Conclusions

As PRTRs are implemented, many concerns initially voiced by industry did not arise or were addressed as companies and governments gained experience and developed strategies to respond to their concerns. Industry and governmental managers alike recognize the usefulness of PRTR data for highlighting opportunities for source reduction and improved chemicals management, for prompting discussions with host communities and for tracking progress made in the context of voluntary reduction programmes.

The following is some suggested guidance, based on experiences gained in countries with existing PRTR programmes. It is directed at both industry and government in countries that are in the early stages of establishing PRTRs.

Careful design of reporting requirements and clear instructions for facilities can help avoid confusion and reporting errors.

Companies need a clear description of the criteria for reporting to know whether to report and, if so, how. It is particularly helpful to point out how a PRTR relates to and/or differs from other reporting requirements with which facilities may be familiar. This is especially important when PRTR-like data are already collected and/or reported to the government. One approach is to incorporate and consolidate the PRTR with other reporting requirements.

Piloting the PRTR in a region or within a specific sector can help identify ways to reduce concerns.

Pilot PRTRs can identify the level of training and assistance needed by companies to be able to report under a PRTR. A PRTR pilot allows both government and industry personnel the opportunity to gain valuable experience in handling the reporting, management, analysis and dissemination of PRTR data and to understand the perspectives of other stakeholders.

Training helps companies, particularly smaller ones, quickly learn how to report PRTR data.

Training workshops with an expert facilitator have proven very useful in introducing PRTRs to companies and increasing their understanding of what is required of them. When a government's training budget is limited, offering the training via an online webinar allows the government to reach facilities throughout the country without incurring the expense or time of in-person workshops. With a live trainer (rather than a recorded session) conducting the webinar, facilities have the opportunity to ask specific questions that ensure they understand their requirements before submitting their PRTR data. Industry associations are also well situated to develop sector-specific training programmes on methods for tracking the chemicals used at the facility level and techniques for estimating releases. Industry associations may also work with their members to improve methods of data estimation. Larger companies play an important role by working with their suppliers and customers to ensure that information is available on inputs (e.g. chemical substances and products), information which is often needed for PRTR reporting. Recorded sessions can also prove to be an effective means of providing training to facilities on some of the more common issues facilities face as well as on new changes to the reporting system. Although this method is not interactive, it provides a mechanism whereby facilities can access these sessions at their convenience if shared, for example, on the PRTR website. It is also equally important to have a method whereby facilities can direct specific questions to the PRTR country such as an email address or toll-free number.

Investment in analysis, dissemination and use of PRTR data reduces the likelihood of misinterpretation or inappropriate use.

Experience demonstrates that companies can reduce or avoid inappropriate use and misinterpretation of PRTR data by taking the lead in using the data to initiate dialogues with stakeholders and by being proactive in reducing their releases. Companies themselves can issue reports that present their data in the context of their overall sustainability goals. They can use the data to publicize progress toward reduction goals and as a basis for working with communities and other concerned parties.

Governments can prepare and disseminate prompt analyses of PRTR data, which track the sources, amounts and types of pollution.

Linking PRTR data to national environmental goals and displaying it by geographic region, such as on an interactive map, helps put the data into context, thereby enabling users to interpret its significance for themselves. Providing ready access to PRTR data online, thereby allowing interested individuals and groups to analyse the data themselves and to check the analyses performed by others, which can help to encourage appropriate uses and to reduce the likelihood of misinterpretation.

Facilities' costs of reporting can be balanced by other benefits associated with facility-level data tracking systems, including opportunities to reduce material and waste management costs and to better protect workers.

Governments and trade associations can work through technical assistance programmes, voluntary initiatives and pollution prevention planning programmes to encourage companies to use their PRTR data to help identify opportunities to reduce chemical-related risks. In addition, collection and analysis of PRTR data may also help a company improve product quality and lower its production costs, in addition to reducing environmental expenses. the data to publicize progress toward reduction goals and as a basis for working with communities and other concerned parties.

Annex 1: References

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