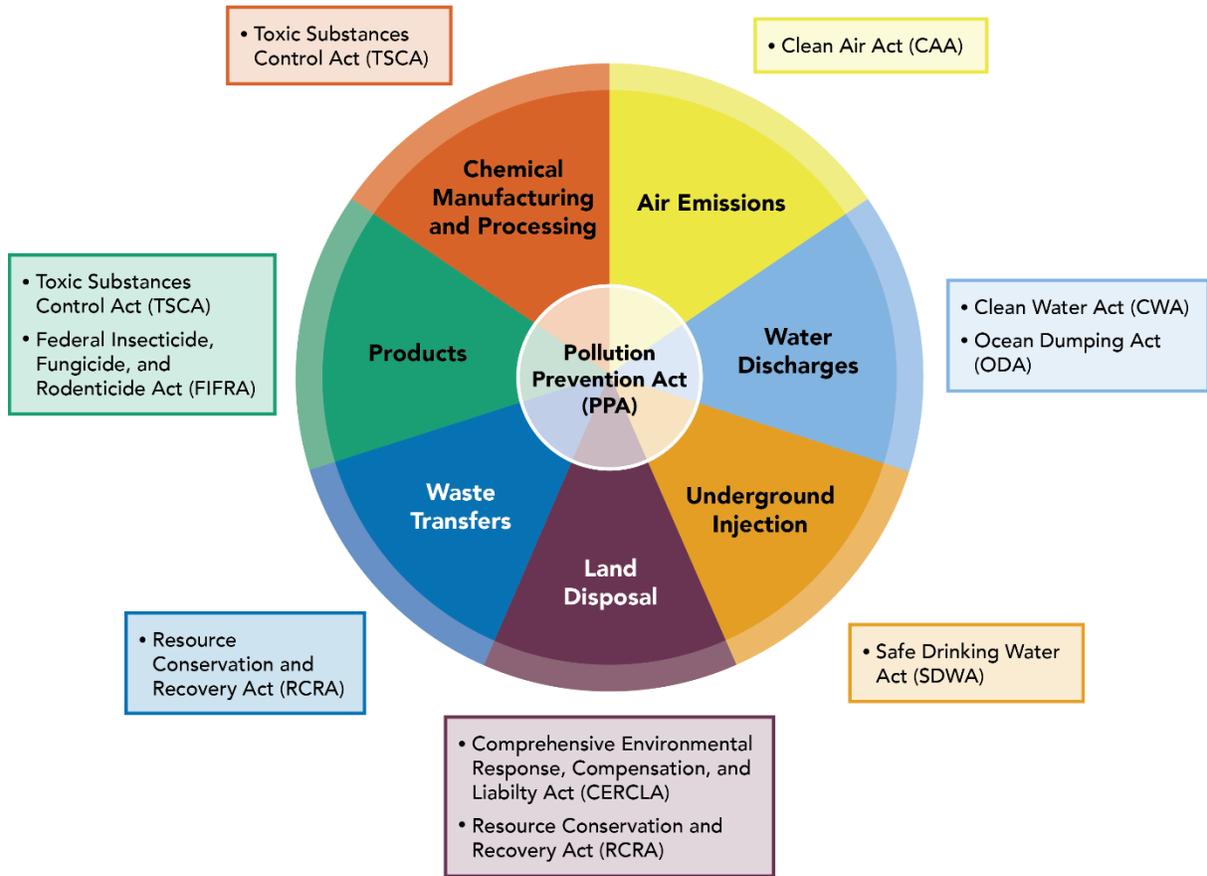


TRI and Beyond

This section presents how the Toxics Release Inventory (TRI) relates to other EPA environmental and chemical management programs and laws, and how the TRI serves as a model for pollutant release and transfer inventories internationally.

The TRI is a powerful resource that provides the public with information about how TRI chemical wastes are managed by facilities in the United States. Beyond the TRI, there are many other programs at EPA that also collect, through regulations established under laws, various types of information about TRI chemicals and other chemicals. The next figure is an overview of some of the laws that EPA implements, and the industrial activities or processes EPA regulates under these laws.

While many programs at EPA focus on one medium, i.e., land, air or water, TRI is unique in that it covers all media, including the release of chemicals to air, water, and land, and waste transfers. In addition, facilities that are subject to the TRI reporting requirements are required to submit TRI reports annually. As a result, TRI data are especially valuable, as they are timely and can be used with data from other datasets to provide a more complete picture of national trends in chemical use, chemical management, environmental release and other waste management practices, and environmental performance.



Note: The Emergency Planning and Community Right-to-Know Act (EPCRA) establishes requirements for emergency planning, preparedness, and reporting on hazardous and toxic chemicals involving air releases, water releases, land disposal, waste transfers, and the quantities of chemicals on site, the type and location of storage of those chemicals, and their use.

Offices throughout EPA use TRI data to support their respective missions to protect human health and the environment. These uses include technical analysis for regulation, informing program priorities and projects, providing information to internal and external stakeholders, and many other applications.

More on EPCRA

The TRI was established by the Emergency Planning and Community Right-to-Know Act (EPCRA) in 1986. The creation of EPCRA was in response to what is widely considered to be the worst industrial chemical disaster in history. Beginning on December 2, 1984, methyl isocyanate gas was accidentally released from a chemical plant in Bhopal, India. Thousands of people died that night and many more were injured. Thousands more died later as a result of their exposure, and survivors of the accident continue to suffer with permanent disabilities. Approximately six months later, a similar incident occurred at a facility in West Virginia. These two events raised concern about local preparedness for chemical emergencies and the availability of information on toxic chemicals.

EPCRA establishes requirements for federal, state and local governments, Indian tribes, and industry regarding **emergency planning** and **"Community Right-to-Know" reporting** on hazardous and toxic chemicals. These requirements are specified in EPCRA's four major provisions as shown in the figure below. Information collected under EPCRA helps states and communities develop a broad perspective of chemical hazards for the entire community, as well as for individual facilities. The TRI (also known as EPCRA section 313) contributes to this broader perspective by making information about the management of chemical waste generated at facilities available to the public, further supporting informed decision-making by companies, government agencies, non-governmental organizations, communities, and others.

Key Elements of the Emergency Planning and Community Right-to-Know Act (EPCRA)

WHO PLANS FOR EMERGENCIES?

Section 301 of EPCRA established a structure to help the federal government, states, tribes, and communities prepare for emergencies

SERC State Emergency Response Commission

TERC Tribal Emergency Response Commission

- Designate emergency planning districts
- Appoint, oversee, and coordinate with LEPCs and TEPCs
- Develop procedures for receiving information requests
- Review emergency response plans from LEPCs and TEPCs

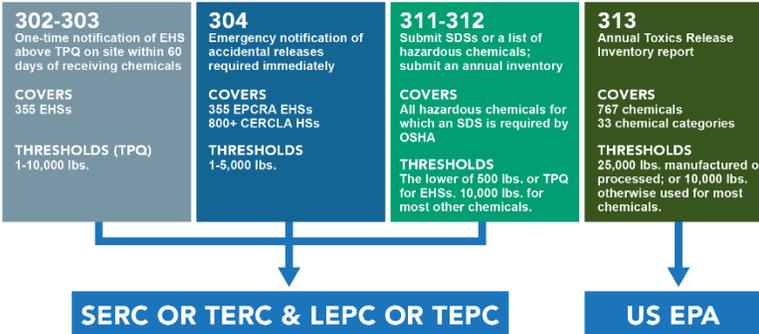
LEPC Local Emergency Planning Committee

TEPC Tribal Emergency Planning Committee

- Members include local officials, facility representatives, community groups, and media
- Develop emergency response plans and review them annually
- Disseminate information to public about chemicals present in community



WHAT DO FACILITIES REPORT UNDER EPCRA?



WHAT'S IN AN EMERGENCY RESPONSE PLAN?

Section 303 requires LEPCs and TEPCs to develop emergency response plans, which dictate what should happen in the case of a chemical accident. These plans are reviewed annually and include:

- Facilities with EHSs above TPQs
- Routes for transporting EHSs
- Other facilities at risk or contributing to risk
- Community and facility emergency coordinator(s)
- Emergency notification procedures
- Methods to determine affected area and population
- Methods and timing to practice response drills
- Evacuation plan
- Training for emergency responders
- Emergency equipment with responsible facilities and persons

WHAT'S IN A FACILITY'S TRI REPORT?

Section 313 requires facilities that meet the reporting criteria to submit annual TRI reports that include data on the quantities of chemicals they released into four environmental media:



In 1990, EPA's Pollution Prevention Act expanded the TRI report to include information on facilities' activities to prevent or minimize waste generation and changes in production. In addition to releases, facilities are required to report the quantities of chemical wastes managed through:

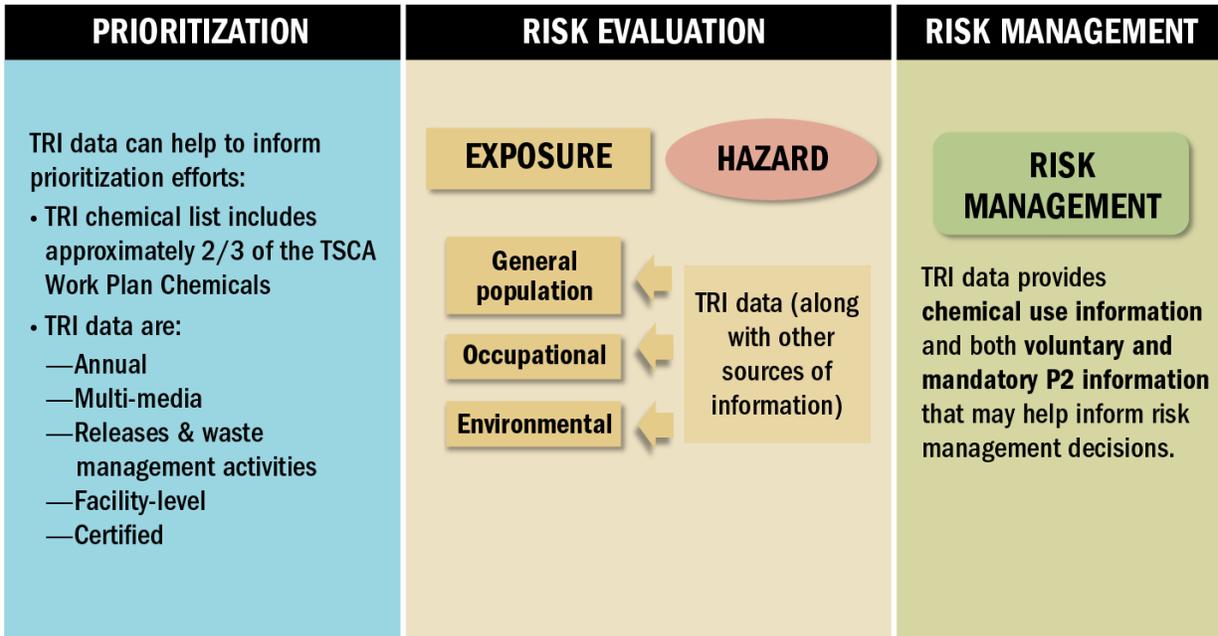


TSCA and TRI

This section highlights how TRI information contributes to data used in Toxics Substances Control Act (TSCA) risk evaluations. TRI data serve as a source of environmental information for TSCA throughout the three-stage chemical evaluation process. TSCA, as amended by the Frank R. Lautenberg Chemical Safety for the 21st Century Act, is the nation’s primary chemicals management law. TSCA requires EPA to evaluate existing chemicals in commerce and new chemicals intended for use in commerce for safety. The Agency is required to conduct a transparent, risk-based process. EPA selects existing chemicals for further evaluation from the 2014 [Update to the TSCA Work Plan](#), which helps to focus and direct EPA’s activities.

The three stages of [EPA’s process for evaluating the safety of existing chemicals](#) are prioritization, risk evaluation, and risk management. EPA first **prioritizes** toxic chemicals in commerce through a screening-level review, **evaluates** those chemicals to determine if they present unreasonable risks, and then **manages** the unreasonable risks of those chemicals to protect human health and the environment. During both the prioritization and risk evaluation stages of the process, TRI serves as a source of information as illustrated in the figure below. TRI data may also be used in the risk management stage of the process.

TRI Data Use in TSCA Chemical Evaluations



Prioritization. Approximately two-thirds of the chemicals identified in the 2014 update of the TSCA Work Plan are also included on the TRI list of chemicals. TRI data can inform EPA’s prioritization of chemicals for risk evaluation because the data are collected annually and

include the location of facilities and the quantities of TRI chemicals they released to air, water and land, and transferred to off-site locations. In addition, trend analyses of TRI data can help identify changes over time in the geographic location and quantities of releases, and the types of industrial sectors managing these chemicals.

Risk evaluation. A [TSCA risk evaluation](#) of a chemical is a comprehensive evaluation of the risks the chemical poses to human health and the environment. EPA evaluates how the chemical will be used, which may include manufacturing and import, processing, use, distribution in commerce, and disposal over the chemical's life cycle. During risk evaluation, EPA is required to assess exposures to the chemical in the workplace, to the general population and to environmental (e.g. ecological) receptors. This includes assessment of potentially exposed or susceptible populations that may be sensitive to the potential hazards posed by the chemical under review. TRI and other data are used to support these assessments under TSCA.

Risk Management. If EPA determines that a chemical poses an unreasonable risk of injury to health or the environment under its methods of use, EPA will impose regulatory actions or other risk management options to effectively manage the identified risk. These regulatory actions and options may include labeling with warnings and instructions for use, recordkeeping or notice requirements, restrictions on certain uses or activities to reduce human exposure or environmental releases, or a ban of the chemical entirely. EPA may use TRI data, such as on chemical use and pollution prevention practices, to help inform these risk management decisions.

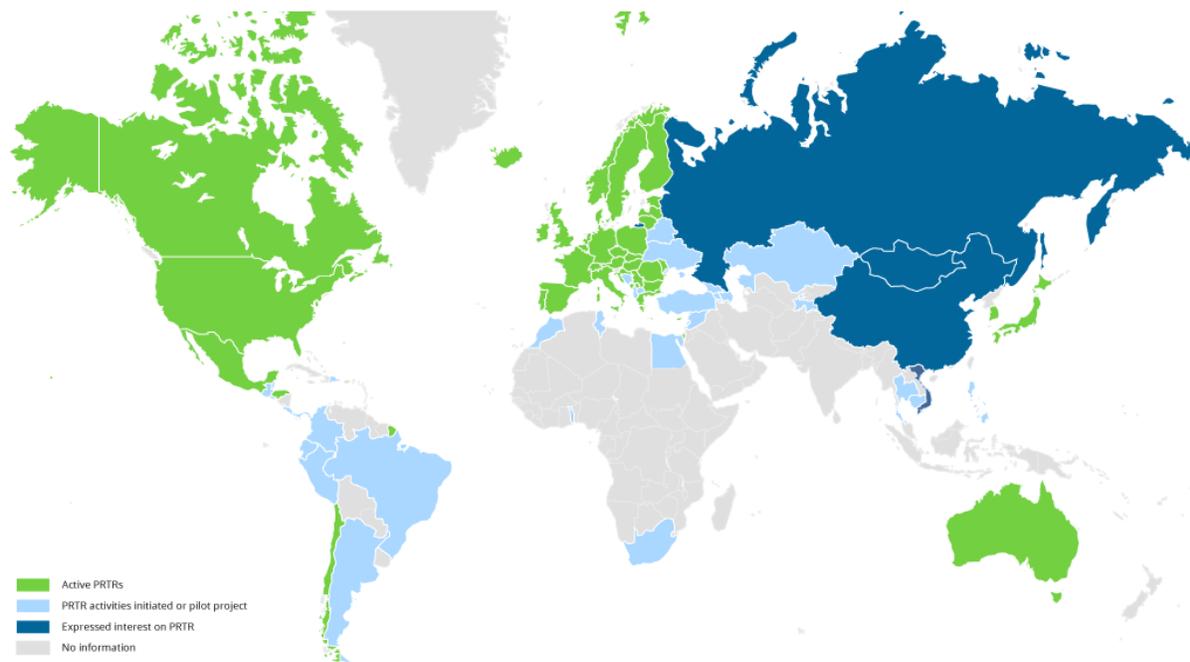
High-priority Substances for TSCA Risk Evaluation

In 2017, EPA published the scope documents for the [initial ten chemicals undergoing risk evaluation](#) under the amended TSCA in which nine of the ten chemicals are TRI-reportable chemicals (except for C.I. Pigment Violet 29).

In 2019, EPA announced the next 20 chemicals to undergo risk evaluation. Finalizing this list of [high-priority chemicals for risk evaluation](#) establishes the TSCA prioritization queue which requires ongoing review and selection of priority chemicals as evaluations are completed. This marks a major milestone for EPA in its efforts to ensure the safety of existing chemicals in the marketplace through its updated chemical management program. In August 2020, EPA published the [final scope documents](#) for these 20 chemical substances, of which 13 are TRI-reportable chemicals.

TRI Around the World

In 1986, with the enactment of the Emergency Planning and Community Right-to-Know Act (EPCRA), the TRI was established as the first national Pollutant Release and Transfer Register (PRTR) in the world. Since then, environmental agencies in other countries have implemented their own right-to-know PRTR programs modeled after the TRI program. Currently, at least 50 countries have fully established PRTRs or have implemented pilot programs, as shown in the map below. More countries are expected to develop PRTRs in the future, particularly in Asia, South America, and Africa.



Source: United Nations Economic Commission for Europe PRTR Global Map

As global PRTR implementation continues to grow, the TRI Program will continue to work with international organizations to:

- Assist in the development of new PRTR programs,
- Promote data standards and core data elements for greater PRTR comparability and harmonization, resulting in better global scale analysis capabilities, and
- Showcase PRTR data utility for assessing progress towards sustainability.

As an example, the TRI Program is currently working with the [Organization for Economic Co-operation and Development \(OECD\)](#) [EXIT](#) on a project to use global PRTR data to assess progress toward the Sustainable Development Goals established in the [United Nation's 2030 Agenda for Sustainable Development](#) [EXIT](#), as described in the Project Spotlight below. For

information on international PRTR activities, projects and partners, see [TRI's International webpage](#).

International Project Spotlight: Using PRTR Data to Assess Progress toward the U.N. Sustainable Development Goals

Background. The TRI Program is collaborating on an OECD project to use global PRTR data to assess progress toward the [United Nations' \(U.N.\) Sustainable Development Goals \(SDGs\)](#). These goals are designed to “shift the world on to a sustainable and resilient path” by setting targets that encompass the economic, environmental, and social dimensions of sustainability. As stakeholders act toward achieving the SDGs, the U.N. will measure progress toward the Goals using existing data where possible. One such existing data source for some of the SDGs may be found in countries' PRTR data.

Project Focus. The [U.N. SDG Target 12.4](#) **EXIT** was identified as the target most directly relevant to PRTR data and is the focus of this initial phase of the project. This target focuses on reducing chemical releases to the environment.

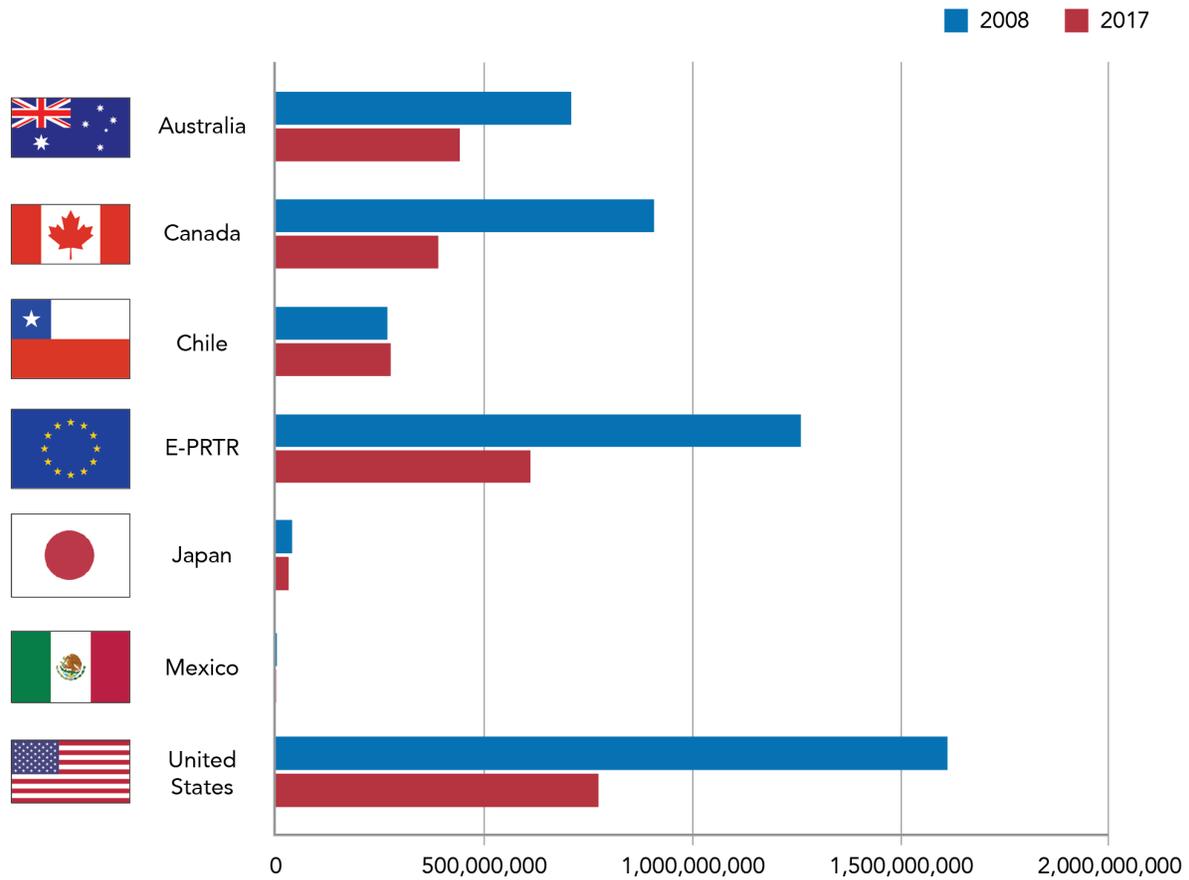
Project Status. Global analyses of PRTR data are currently underway based on aggregated data for multiple chemicals from multiple countries in order to provide insight into progress toward achieving SDG Target 12.4. The figure below shows the trend for air and water releases of 14 pollutants from manufacturing facilities as reported to the 7 PRTRs analyzed in the project.

Next steps. As the project progresses and the methods and metrics are reviewed and refined, the findings may be included in the next update of the [U.N. Sustainable Development Goals Report](#) **EXIT**.

SDG Target 12.4

By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

Change in releases of 14 pollutants, 2008 to 2017 (kg)



PRTRs included in the analyses: Australia – National Pollutant Inventory (NPI), Canada – National Pollutant Release Inventory (NPRI), Chile – Registro de Emisiones y Transferencia de Contaminantes (RETC), European Union – European Pollutant Release and Transfer Register (E-PRTR), Japan Pollutant Release and Transfer Register (PRTR), Mexico – Registro de Emisiones y Transferencia de Contaminantes (RETC), United States – Toxics Release Inventory (TRI).

Chemicals included in the analyses: 1,2-Dichloroethane, Benzene, Cadmium, Chromium, Di-(2-ethylhexyl) phthalate, Dichloromethane, Ethylbenzene, Mercury, Nickel, Particulate matter, Styrene, Sulfur oxides, Tetrachloroethylene, Trichloroethylene.

[Read more about the TRI Around the World.](#)