

# Preparing a National PRTR Infrastructure Assessment

July 1997



**IOMC**

**INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS**  
A cooperative agreement among UNEP, ILO, FAO, WHO, UNIDO, UNITAR and OECD

***UNITAR Guidance Series for Implementing a National Pollutant Release and Transfer Register (PRTR) Design Project***

Complementary to the OECD *Guidance Manual for Governments* and based on the lessons learned through pilot initiatives in Mexico, the Czech Republic and Egypt, UNITAR has developed the following documents in a guidance series intended to assist countries in undertaking a national PRTR design project:

- ! Implementing a National PRTR Design Project: A Guidance Document
- ! Supplement 1: Preparing a National PRTR Infrastructure Assessment
- ! Supplement 2: Designing the Key Features of a National PRTR System
- ! Supplement 3: Implementing a PRTR Pilot Reporting Trial
- ! Supplement 4: Structuring a National PRTR Proposal

Additional documents, including technical support and general reference materials on various aspects of PRTR design and implementation, are also available from UNITAR.

This document has been prepared in the context of UNITAR's *Training and Capacity Building Programme to Facilitate the Design and Implementation of Pollutant Release and Transfer Registers (PRTRs)*, which is financially supported by the U.S. Environmental Protection Agency.

**For additional information please contact:**

Training and Capacity Building Programmes in Chemicals Management  
United Nations Institute for Training and Research (UNITAR)  
Palais des Nations  
CH-1211 GENEVE 10  
Switzerland  
FAX +41 22 917 8047  
EMAIL: [cwm@unitar.org](mailto:cwm@unitar.org)  
WEBSITE: [www.unitar.org/cwm](http://www.unitar.org/cwm)

97D012

## TABLE OF CONTENTS

1.	Introduction to the Document .....	1
2.	Overview of the National PRTR Infrastructure Assessment Report .....	2
3.	Preparing a National PRTR Infrastructure Assessment Report.....	3
4.	Suggested Structure and Guidance Questions for the National PRTR Infrastructure Assessment Report .....	5
I.	Background Information Relevant to a National PRTR .....	5
II.	National Legal/Regulatory Infrastructure Relevant to a National PRTR .....	6
III.	National Institutional/Administrative Infrastructure Relevant to a National PRTR.....	9
IV.	Programmes Conducted by Industry, Research Institutes and Public/Environmental Interest Groups Relevant to a National PRTR.....	12
V.	Programmes Conducted with Support of International and Bi-lateral Organizations Relevant to a National PRTR.....	13



## 1. INTRODUCTION TO THE DOCUMENT

This guide is the first of four supplements to the main guidance document in the UNITAR *Guidance Series for Implementing a National PRTR Design Project* (see box on inside front cover). The guidance series builds on the substantive and technical information contained in the OECD's *Pollutant Release and Transfer Registers (PRTRs): A Tool for Environmental Policy and Sustainable Development: Guidance Manual for Governments* by providing countries with a suggested step-wise approach for undertaking the design of a national PRTR system. Each of the supplementary documents in the series provides in-depth guidance on a specific stage of UNITAR's suggested approach for implementing a national PRTR design project. The guidance is not meant to be prescriptive and should be adapted by countries in a flexible manner according to their specific needs and circumstances.

The 6 suggested stages of a national PRTR design project are the following:

1. Identifying the Goals of the National PRTR System
- 2. Assessing the Existing Infrastructure Relevant to a National PRTR**
3. Designing the Key Features of a National PRTR System
4. Conducting a PRTR Pilot Reporting Trial
5. Finalizing the National PRTR Proposal
6. Organizing a National PRTR Implementation Workshop

This document provides specific guidance on implementing Stage 2 of the suggested PRTR design process which is the preparation of a National PRTR Infrastructure Assessment Report. This comprehensive report documents the existing legal, institutional, administrative and technical infrastructure and available national expertise relevant to the design and implementation of a national PRTR system, and thus is a key input for the PRTR design project.

The following sections provide concrete guidance on the preparation of a National PRTR Infrastructure Assessment Report. Section 3 provides an overview of the contents and purpose of such a report. Section 4 offers suggestions on how the National Coordinating Team (NCT) might organize the assessment process and develop the final report. The remainder of the guide covers in depth each of the substantive area to be addressed in the assessment, including a suggested structure for the report and guidance questions to assist in preparing each of its sections.

## **2. OVERVIEW OF THE NATIONAL PRTR INFRASTRUCTURE ASSESSMENT REPORT**

The National PRTR Infrastructure Assessment Report should summarize the current status of legal, institutional, administrative and technical infrastructures relevant to the design of a national PRTR system, in both the governmental and private/non-governmental sectors. Generally, the information relevant to the design of a PRTR is related to monitoring, estimation, collection and/or analysis of data on emissions of pollutants to various environmental media (air, water, soil) and the generation of waste. For example, all existing regulations requiring reporting of pollutant emissions data including the responsible agencies, the types of information collected, and the current uses of the information, would be of interest to those involved in designing a comprehensive PRTR system. Likewise, any previous studies or available expertise on pollution sources and the estimation of pollutant releases to the environment would be extremely valuable inputs for the design of the national PRTR.

It is suggested to divide the report into 5 subject areas. These are:

- (1) Background Information
- (2) National Legal/Regulatory Infrastructure
- (3) National Institutional/Administrative Infrastructure
- (4) Programmes Conducted by Industry, Research Institutes and Public/Environmental Interests Groups
- (5) Programmes Conducted with Support of International Organizations

Once all the available information related to PRTRs has been compiled into a coherent National PRTR Infrastructure Assessment Report, this document will be used as a main reference by the National Coordinating Team throughout the design of the national PRTR. The report may also play an important role in identifying critical issues which need to be addressed in consultation with concerned parties in order to ensure that the PRTR system will receive broad policy support. The process of collecting the information for the national PRTR infrastructure assessment is an important means for contacting key individuals and sources of expertise that should be involved in the PRTR design project as participants in the National Coordinating Team. For these reasons, the National PRTR Infrastructure Assessment Report is one of the key documents to be prepared during the PRTR design project.

---

### 3. PREPARING A NATIONAL PRTR INFRASTRUCTURE ASSESSMENT REPORT

Basic to the success of preparing a National PRTR Infrastructure Assessment Report is the establishment of a clear management structure for overseeing its preparation. It is therefore suggested that the National Coordinating Team, which is the entity responsible for the national PRTR initiative, organizes and supervises the work involved in conducting the assessment and developing the report.

Experience has shown the importance of conducting active outreach to ensure that all parties who might contribute relevant information or expertise are aware that the PRTR infrastructure assessment is being initiated. The members of the National Coordinating Team will play a key role in identifying contact points in government, industry, academia, research institutes, non-governmental organizations, labour groups, and other relevant sectors.

It is important to establish good contact with the various governmental agencies and ministries that are likely to have information or expertise relevant to the PRTR initiative, and obtain their cooperation and involvement in the preparation of the assessment report. Ministries/agencies that should be contacted include:

- ! Ministry of Environment;
- ! Ministry of Trade/Industry;
- ! Ministry of Health;
- ! Ministry of Labour;
- ! Local regulatory agencies; and
- ! Any other agencies with programmes relevant to the PRTR initiative.

Organizations outside of government will also be a key source of information and input for the national PRTR infrastructure assessment. One section of the suggested report format specifically addresses the relevant programmes of industry, research organizations and public/environmental interest groups. It is suggested that the members of the NCT conduct interviews with and otherwise solicit input from representatives of the following organizations in conducting the national PRTR infrastructure assessment:

- ! National industry associations;
- ! National chemical industry associations;
- ! Major companies, including multi-national corporations;
- ! Universities with environmental programmes;
- ! Research institutes with environmental programmes;
- ! Environmental groups; and
- ! Public interest groups.

The process of conducting the infrastructure assessment should be kept as transparent as possible and devoid of partial political taints. When scheduling meetings with the various agencies and non-governmental bodies from whom information is being sought, a clear indication should be provided about the purpose of collecting the information, the broader context of the national PRTR initiative, and how these various bodies can contribute or become involved. A copy of the guidance document *Implementing a National PRTR Design Project* should be made available.

In addition to conducting necessary research in the various subject areas, preparing the final report is an important part of the work. The National Coordinating Team may want to delegate the drafting of certain sections to particular agencies or experts, or establish informal working groups. Alternatively, a knowledgeable and unbiased local consultant (e.g., based in a respected university) could be involved in collecting relevant information and drafting various chapters, subject to further review by the National Coordinating Team.



---

#### 4. SUGGESTED STRUCTURE AND GUIDANCE QUESTIONS FOR THE NATIONAL PRTR INFRASTRUCTURE ASSESSMENT REPORT

Following are brief descriptions and possible contents for each of the five suggested sections of the National PRTR Infrastructure Assessment Report. Guidance questions are provided for each topic area to assist in gathering the necessary information and to ensure that the key issues are addressed.

##### *Introduction to the National PRTR Infrastructure Assessment Report*

The introduction to the report should familiarize the reader with the national work related to the development of a PRTR and clearly state the purpose of the National PRTR Infrastructure Assessment Report. It may also be useful to briefly describe the process through which the information was gathered, including the involvement of relevant parties within and outside of government.

##### *I. Background Information Relevant to a National PRTR<sup>1</sup>*

###### Overview

Section 1 of the National PRTR Infrastructure Assessment Report provides an introduction to the economic infrastructure of the country (e.g. industrial, agricultural) as well as information on chemical use patterns. Information is provided on the economic sectors and geographic regions in the country which generate or experience high levels of pollutant releases and transfers. This assessment serves to identify a preliminary list of pollutants or chemical substances of concern that could be tracked through a PRTR. It also serves to identify the major types of pollutant sources and economic sectors of interest for a PRTR system.

###### Suggested Contents

###### 1.1. Overview of the National Economic Infrastructure

- ! What are the main characteristics of the economic infrastructure of the country such as main industrial and agricultural activities/sectors?
- ! What are emerging sectors with high growth rates?
- ! What is the profile of the national chemicals producing industry and what are emerging production patterns?
- ! Which economic sectors are the primary users of chemicals in the country and what types of chemicals are being used? What are the national trends in chemicals use?

---

<sup>1</sup> Countries that have prepared a National Profile to assess the national infrastructure for management of chemicals will find much of the background information for section 1 of the National PRTR Infrastructure Assessment Report in their National Profile document. For information on preparing a National Profile, please see UNITAR/IOMC, *Preparing a National Profile to Assess the National Infrastructure for Management of Chemicals: A Guidance Document*.

### 1.2 Sectors with High Levels of Pollutant Releases and Transfers

- ! Which economic sectors in the country are recognized to produce high levels of pollutant releases and transfers?
- ! What other types of activities (e.g. transportation) are associated with significant non-point or diffuse sources of pollutant emissions?

### 1.3 Regions in the Country with High Pollution Burden

- ! Which regions in the country are characterized by relatively high pollutant releases and transfers ("hot spot areas")?
- ! Which specific economic sectors or activities are the main contributors to these emissions and transfers for each identified region?

### 1.4 National/Regional Environmental Priority Problems Related to Pollutant Releases and Transfers

- ! Which environmental and human health problems have been identified in association with specific pollutant releases and transfers, and in what specific regions of the country?

### 1.5 Public Awareness and Access to Information Related to Pollutant Releases/Transfers

- ! How is the public informed about the state of the environment and/or the environmental problems which cause national and local concern?
- ! Is a State of the Environment Report prepared and widely disseminated? If so, does this report provide specific information on pollutant releases and transfers?
- ! Does the public currently have access to pollutant release data or similar types of environmental information? How is access to the data provided?

## ***II. National Legal/Regulatory Infrastructure Relevant to a National PRTR***

### Overview

Section 2 of the National PRTR Infrastructure Assessment Report documents existing environmental laws and regulations which relate to pollutant releases and transfers, emissions control and pollution prevention. The chapter is also meant to provide information to determine the coherence of the existing legal/regulatory framework in relation to the reporting of pollutant releases and transfers to various environmental media.

One of the main objectives of section 2 is to provide information to the National Coordinating Team to address the following two questions: (a) Do current environmental

laws provide a framework into which a PRTR system could be incorporated and, if so, are modifications to the current system required? and (b) Is there a need to enact new legislation to establish the legal and institutional basis for a national PRTR system?

The main sources of information for preparing section 2 are the official texts of all relevant environmental laws and regulations. Interviews with government agency staff who are responsible for implementing these laws on a routine basis, as well as with private and government environmental lawyers, are also recommended.

### Suggested Contents

#### 2.1 Framework Legislation Related to Chemicals Management

- ! Is general framework legislation in place that addresses environmental, occupational health and public health problems associated with pollutant releases and transfers?
- ! Is chemicals management framework legislation in place which addresses the various stages of the chemical life cycle, such as production, storage, transport, use, and disposal?
- ! Does any law or regulation classify production processes according to risks to human health and the environment?
- ! Does any law or regulation classify chemicals and/or chemical use according to risks to human health and the environment?

#### 2.2 Legal Mandates of Government Authorities

- ! Which government agencies have received a legal mandate to regulate or control:
  - the generation (production), use and/or transfer of chemicals or chemical products;
  - releases of chemical pollutants to air, water, land;
  - transfers of pollutants/wastes;
  - accidental spills; and/or
  - disposal of wastes, including hazardous wastes?
- ! Does any law assign responsibility to a national authority to establish and operate an environmental information system on the state and quality of the national environment?
- ! Does any law assign responsibility to a national authority to maintain a database with available information on pollutant releases and transfers?

### 2.3 Licensing/Permitting Schemes for Industrial Facilities and Processes

- ! Does any law or regulation provide a mandate to an agency to identify and locate industrial facilities which handle, produce, release and/or transfer dangerous substances?
- ! Does any law or regulation mandate licensing of industrial facilities which release and transfer dangerous pollutants and wastes?
- ! Which industrial processes and chemicals are subject to licensing?

### 2.4 Regulatory Standards for Pollutant Releases and Transfers to Air, Water and Land

- ! Do any regulations mandate maximum permissible levels of emissions or discharges to air, water and/or soil?
- ! If so, do these regulations specify the methods to be used to measure, quantify or estimate pollution quantities/concentrations?
- ! What criteria are applied in establishing the regulatory standards? Are they driven by quality goals (e.g., ambient air quality level to be achieved) or by the availability of technological options (e.g., specific pollution control devices to be used)?

### 2.5 Reporting Requirements for Pollutant Releases and Transfers

- ! Do any regulations mandate industry to collect, monitor and report information on:
  - releases of chemical pollutants;
  - transfers of pollutant/wastes;
  - accidental spills;
  - disposal of chemical wastes; and/or
  - generation, use, and/or transfer of chemicals?
- ! Are there regulations which specify in detail the format and procedures to be applied for data submission?
- ! If so, for which specific industries and chemical substances do the reporting requirements apply?

### 2.6 Enforcement of PRTR Related Legislation and Regulations

- ! Are the regulatory requirements identified above properly implemented and enforced? If not, what are the major constraints in ensuring proper enforcement?

---

## 2.7 Legal Provisions Related to Environmental Information Management and Dissemination

- ! Does any law assign responsibility to a government agency to disseminate information on pollutant releases and transfers?
- ! Is there any element in the national legislation mandating public disclosure of environmental information?
- ! Is there any right-to-know component at the individual, community, regional or national level?
- ! Is there any element in the laws preventing disclosure of information (e.g. information on production processes, emissions levels, etc.) for proprietary reasons?

### ***III. National Institutional/Administrative Infrastructure Relevant to a National PRTR***

#### Overview

Section 3 of the National PRTR Infrastructure Assessment Report documents the existing institutional/administrative infrastructure and assesses the existing capacity for taking on the operation of a national PRTR system. The section should describe the current responsibilities and programmes conducted by various governmental agencies in the area of pollutant emissions information, as well as existing coordinating mechanisms. Section 3 should also provide an overview of existing databases on pollutant emissions, as well as current reporting and monitoring mechanisms for emissions data. A preliminary assessment of the feasibility of integrating existing reporting requirements into the new PRTR system might also be considered. This would entail examining existing formats and procedures used by various governmental agencies to collect information on pollutant releases and transfers, evaluating the present use of these various mechanisms, and exploring the possibility of integrating them into a single PRTR database.

The main source of information for section 3 could be interviews with the staff of various government agencies at different levels of authority. These interviews are important to obtain a clear picture of the current institutional arrangements and actual mechanisms in relation to the reporting of pollutant emissions data. It is important to assess how these reporting mechanisms operate in practice and to what extent regulatory provisions are actually implemented.

#### Suggested Contents

### 3.1 National Authorities Concerned with Chemicals Management, Pollution Control/Prevention and Waste Management

- ! Which ministries have responsibility for identifying, prioritizing, and managing chemicals-related problems throughout the chemical life cycle, in particular as regards:
  - production;
  - storage;
  - transport;
  - use; and
  - disposal?
  
- ! Are these efforts coordinated, and if so, how?
  
- ! What is the hierarchical authority and what are the reporting links between the various agencies and their subunits?
- ! Which agencies are in charge of determining the chemicals to be regulated?
  
- ! What are the criteria for classifying chemicals (health or environmental risks, explosive potential, etc.)?
  
- ! Is there a specified regulatory or administrative procedure to add/delete chemicals from these lists? Are industry and public/environmental groups involved in these procedures?

*Additional Suggestion*

- " *It may be useful to develop an organizational flow chart of ministries, agencies and subunits indicating their relative authority and reporting relationships.*

### 3.2 Implementation of Licensing Schemes for Industrial Facilities

- ! Which agencies grant licences for facilities which produce, handle, release and transfer dangerous substances?
  
- ! What licensing/permitting procedures are applied?
  
- ! Are all point sources known which are emitting or transferring significant levels of dangerous chemicals and wastes?
  
- ! Which industrial facilities are covered by the existing licensing schemes?
  
- ! Where are the collected data and licensing records stored?
  
- ! If more than one system exists, how do they relate to each other? Is there any duplication of effort or overlap in the information being collected?
  
- ! What resources are required in government to implement current licensing and reporting requirements?

- ! How would current responsibilities/mandates of different governmental agencies change as a result of integrating multiple current reporting/licensing requirements?

*Additional Suggestions*

- " *It may be useful to develop a list of licensed industrial point sources of pollutants. This list may help in identifying potential reporters under a national PRTR.*
- " *It may be useful to collect all existing lists of regulated chemicals. These may assist in determining candidate chemicals for inclusion in a national PRTR.*
- " *It may be useful to collect all existing reporting formats. These reporting formats may provide a starting point for designing a reporting format for the national PRTR. In addition, they will be useful for assessing the possibility of integrating/simplifying existing reporting formats.*

### 3.4 Information Management Policies

- ! Are lists of licensed facilities easily and publicly accessible, including their locations?
- ! What databases containing PRTR related information exist? Are they automated in any way? How is information entered into the database?
- ! Which agencies maintain the databases and in what formats?
- ! Is the data that is currently collected being used, and if so, how and for what purposes?
- ! Are the databases easily accessible? Who has access to the databases?
- ! Are studies/analyses being conducted with the existing data by governmental agencies and/or other entities such as universities, etc. (other than the analyses conducted by the government agency with direct authority over the database)?

*Additional Suggestion*

- " *It may be useful to prepare a flow chart indicating the agencies (or sub-agencies/functional units) which operate PRTR relevant databases. Indicate the name of the database, the nature and content of the records, as well as the policy for accessing the data.*

#### **IV. Programmes Conducted by Industry, Research Institutes and Public/Environmental Interest Groups Relevant to a National PRTR**

##### Overview

Section 4 of the National PRTR Infrastructure Assessment Report documents the activities of industry, research institutes, and public/environmental interest groups and other sectors outside of government that could potentially contribute to the national PRTR design process. Examples of these activities might include: industry initiatives to estimate or monitor their emissions of pollutants and/or to track progress made toward emission reduction targets; initiatives by non-governmental organizations or research institutes to estimate the total pollution burden or environmental risk within a particular locality or region based on a detailed accounting of pollution sources; cooperative undertakings between industries and communities to reduce emissions and risks, etc. These activities of the non-governmental sector can be an invaluable source of information and expertise for the development of a PRTR system.

The process of preparing section 4 should not only provide valuable references, but should also facilitate the establishment of collaborative relationships with various concerned interest groups, as a basis for future consultation. These discussions may also provide an understanding of the general environmental awareness of the public regarding pollution problems, as a basis for assessing whether there is public interest to support innovative uses of the PRTR based upon public disclosure of the pollutant release and transfer information.

##### Suggested Contents

#### 4.1 PRTR Relevant Programmes of Industry

- ! Which initiatives have been taken through industry associations relating to pollution prevention, reduction and control (e.g., responsible care, cleaner production programmes)?
- ! Are there any ongoing programmes within industry to monitor/control/report pollutant releases? Are such initiatives taken by individual companies or by national industry associations?
- ! Do any industries operate voluntary environmental auditing schemes?

##### *Additional Suggestion*

- " *It may be useful to assemble a list of companies, industrial associations, etc. with respective contact points, that are already implementing innovative environmental policies. Liaison with these groups will be useful for future consultations.*

#### 4.2 PRTR Relevant Programmes of Universities, Research Institutes and Public/Environmental Interest Groups



- 
- ! What studies/programmes have been initiated by universities, international organizations or public/environmental interest groups related to inventories of industrial emissions?
  - ! What studies identify problem areas such as regional pollution hot spots, problematic industrial sectors, etc.?
  - ! Has there been previous interest in or work towards a pilot trial of a PRTR-type system?
  - ! What studies have specifically addressed national pollution problems in terms of:
    - the nature of environmental pollutants;
    - pollution-generating profiles for problematic economic sectors;
    - short-, medium- and long-term trends in pollutant releases/transfers for specific economic sectors and/or for specific chemicals substances?

#### *Additional Suggestions*

- " *It may be useful to generate bibliographic references of all pertinent studies that have been identified, including contact points (e.g. authors, universities, research institutions, foundations and other agents responsible for the studies). It is suggested that the NCT collect and become familiar with these studies to avoid duplicating research efforts.*
- " *It may be useful to assemble a list of environmental/public interest groups and other relevant organizations with respective contact points that are already involved in pollution reduction and control efforts. This liaison may be useful for future consultations.*

#### **V. Programmes Conducted with Support of International and Bi-lateral Organizations Relevant to a National PRTR**

Section 5 of the National PRTR Infrastructure Assessment Report provides an overview of international activities and ongoing programmes at the country level which have a pollution prevention, cleaner production, emissions monitoring, or waste management component, or that could provide financial support for projects in these areas. It is important to make contact with these programmes as a basis for identifying possible linkages among related projects and to explore potential contributions that these organizations could provide to the national PRTR initiative. The country-based representatives or regional offices of international organizations such as the Food and Agriculture Organization of the United Nations (FAO), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), United Nations Industrial Development Organization (UNIDO), the World Health Organization (WHO), the World Bank, or the embassies of countries which have bilateral cooperation projects can provide a useful starting point for gathering information. Another important source of information could be the Ministry of Foreign Affairs, especially in

relation to those programmes, international agreements and/or conventions that do not have representative offices in the country.

- ! Which international organizations conduct programmes at the country level that may relate to a PRTR (e.g. UNDP, UNIDO, UNEP, WHO)?
- ! Which bi-lateral development cooperation agencies working at the country level have conducted programmes relevant to a PRTR (e.g. U.S. Agency for International Development (USAID), Canadian International Development Assistance (CIDA), German International Aid Agency (GTZ), Danish International Development Assistance (DANIDA), Swedish International Development Authority (SIDA), etc.)? What are these programmes?
- ! Does the country have a National Environmental Action Plan supported by the World Bank and how are pollutant release and transfer issues being addressed through this plan?

***Suggested Annexes to the National PRTR Infrastructure Assessment Report***

- ! Table of Relevant Regulations
- ! Chemicals Subject to Regulation
- ! Reporting Formats
- ! Addresses/Contact Points in Government Agencies
- ! Addresses/Contact Points in Industries and Industry Associations
- ! Addresses/Contact Points in Universities/Research Institutes
- ! Addresses/Contact Points in Public Interest/Environment Groups