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ORGANISATION FOR ECONOMIC
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POLLUTANT RELEASE AND TRANSFER REGISTERS (PRTRs)

**WORKSHOP FOR CENTRAL AND EASTERN EUROPE AND THE NEW
INDEPENDENT STATES OF THE FORMER SOVIET UNION**

Prague-Pruhonice, Czech Republic
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PRTR: A Tool for Environmental Policy and Sustainable Development

WORKSHOP SUMMARY REPORT

FOREWORD

At the 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, governments adopted a broad manifesto for actions to achieve sustainable development known as Agenda 21. Chapter 19 of Agenda 21, calls on governments to implement and improve databases about chemicals and to develop inventories of emissions in co-operation with industry and the public. Chapter 19 further states that the broadest possible awareness of chemical risks is a prerequisite for chemical safety. An emissions inventory, or Pollutant Release and Transfer Register, provides a vehicle for better management of the environment by providing key information about conditions of the environment. As such, release and transfer type data should be made available to national authorities to the greatest extent possible, taking into account legitimate claims for commercial confidentiality.

As part of the follow-up to UNCED, the Organisation for Economic Co-operation and Development (OECD) developed a Guidance Manual for Governments considering the implementation of a Pollutant Release and Transfer Register (PRTR). The Manual describes key principles a government should take into account when designing a system. It also addresses the practical components of a PRTR and options for implementing a system.

In an effort to communicate the benefits and usefulness of a PRTR as a tool for environmental management, the OECD, in conjunction with the United Nations Institute of Training and Research (UNITAR) and the United Nations Environment Programme, organised a workshop in Prague, Czech Republic, to introduce PRTRs to Central and Eastern European countries and the New Independent States of the Former Soviet Union. This document provides a summary of the workshop and its main conclusions.

This summary report is produced in conjunction with the Task Force for the Implementation of the Environmental Action Programme for Central and Eastern Europe and within the framework of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC).[1]

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[1] The Inter-Organization Programme for the Sound Management of Chemicals (IOMC) was established in 1995 by UNEP, ILO, FAO, WHO, UNIDO and the OECD (the Participating Organizations), following recommendations made by the 1992 UN Conference on Environment and Development to strengthen co-operation and increase international co-ordination in the field of chemical safety. The purpose of the IOMC is to promote co-ordination of the policies and activities pursued by the Participating Organizations, jointly and separately, to achieve the sound management of chemicals in relation to human health and the environment.

EXECUTIVE SUMMARY

The region of Central and Eastern Europe (CEE) and New Independent States of the Former Soviet Union (NIS) is undergoing stark changes politically, economically and socially. New infrastructures and political systems are being created. Governments are making rapid changes in policy hoping to stabilise their economies and downward fluxes in GDP. On top of addressing all these issues, countries are trying to assess the state of their environment and determine plans for action.

Most countries in the region have been left with serious environmental problems and very scarce resources to address them. Given the state of the environment in the region, a Pollutant Release and Transfer Register (PRTR) system could be an effective and practical means for many countries to assess the implications of releases and transfers of potentially hazardous chemicals.

A PRTR calls for firms to report periodically on their releases and transfers on a number of pollutants to air, water and soil collectively. The results provide comparative and quantitative information about such releases. This information can be valuable to governments as they frame environmental policy, analyse the performance of current environmental protection programmes and develop environmental action plans. Moreover, combined with a focus on cleaner production, a PRTR can be extremely useful for identifying candidates for priority measures.

A Pollutant Release and Transfer Register provides a powerful incentive for reporters to reduce releases and transfers. Industry and environmental groups alike have stated that PRTRs have had a stronger impact on reducing toxic emissions than many regulatory programmes even though a PRTR does not set standards nor require environmental improvement. Simply making release and transfer register information accessible to the public encourages firms to take pollution prevention actions.

In January 1997, a workshop was held in Prague-Pruhonice, Czech Republic, to inform countries of the region about PRTRs and the benefits that can be achieved. This report summarises workshop discussions and outcomes about pollution reporting systems and their value in defining and improving environmental conditions. Participants agreed that a PRTR could play an important role in providing key data not before available. These data could help governments more effectively manage the national environment and enhance the efficiency of environmental programmes.

Summary of Workshop

The workshop provided advice on the role and value of a PRTR as a tool for environmental policy and addressed the challenges and opportunities for introducing a system in the region that meets national needs. The meeting agenda and list of participants can be found in Annex 1. A list of papers submitted to the workshop can be found in Annex II.

The workshop itself was divided into plenary and working group sessions. The opening plenary session provided an introduction to Pollutant Release and Transfer Registers and a

description of their potential role and value in the region and as follow-up to Chapter 19 of Agenda 21. The session also served to elucidate current international PRTR activities and potential uses for the CEE and NIS region.

During the second plenary session participants from CEE and the NIS described their country's current environmental situation and indicated whether or not a pollutant emission reporting system existed at the national or sub-national level. These presentations provided a foundation for workshop discussions by not only indicating the seriousness of the environmental situation in these countries, but also by identifying their top priority problems, structural issues and financial and technical needs. The remaining plenary sessions provided a general overview of several national PRTR systems in operation as well as their basic design components, and addressed how a PRTR can be used to promote pollution prevention and cleaner technology/cleaner production.

Two working group sessions were held. These sessions provided an opportunity for participants to explore, in more detail, basic attributes of a PRTR, its uses, benefits and development issues particular to Central and Eastern European countries and the New Independent States. Reports from the working groups gave valuable insight on current needs of the region and addressed how a PRTR could be best designed to meet national needs and environmental priorities. As a result, design and implementation challenges specific to the region were well defined.

Future directions and potential resources for governments seeking assistance to design a PRTR system were discussed in the last plenary session. Several international organisations involved in PRTR work explained their specific activities and the type of assistance which could be provided. Speakers also described existing PRTR information and capacity-building programmes and stressed their willingness and availability to advise governments seeking to establish a PRTR.

Main outcomes

It was readily apparent from workshop discussions that the needs of Central and Eastern European countries and the needs of the New Independent States differed. With this in mind, special design considerations, practical uses and applications were identified for each sub-group. The main outcomes from the workshop were:

- The uniqueness of an economy in transition presents a special set of issues and challenges for developing and implementing environmental policy. Therefore, the starting point for creating a PRTR differs from country-to-country as will the design and scope. For example, many countries are concerned about assessing the current environmental situation while others are trying to measure the performance of recent policy changes. Some governments are more concerned with industrial pollution sources and potentially hazardous substances while others are more focused on conventional pollutants (such as NOx, SOx, particulates or heavy metals). In addition, several countries do not have a pollutant reporting system; others seem to have a number of different systems addressing various issues and topics.

- Joining international environmental conventions and meeting regional and international standards are of great importance to countries in the region. A PRTR could provide a template for collecting necessary cross-media data, enabling governments to set benchmarks and to measure progress against international environmental agreements, standards, norms, protocols, and conventions. Data can also be used internationally to show progress towards

national targets and goals and to measure performance within the context of international commitments.

- A properly designed PRTR can <u>indicate performance</u> and progress towards meeting goals and targets set in a National Environmental Action Plan (NEAP).

- <u>Start simply</u> and build a PRTR system over time. With varying stages of environmental management capacity of nations in this region, governments should start with a system that is simple and expand or modify, in a step-wise manner, depending on national needs, priorities and circumstances over time. Moreover, to maintain its usefulness, the system needs to be sufficiently flexible so as to accommodate modifications easily.

- A PRTR can provide key information for <u>indicating candidates for cleaner production</u>. Given the high priority of cleaner production in countries in the region, it should be included as a goal of a national PRTR programme.

- Results of a PRTR can furnish data to help <u>allocate and leverage scarce resources</u>. Data and information derived from a PRTR can help set national (or regional) priorities and indicate where future problems may emerge, which could assist governments in determining where resources could be utilised most effectively.

- Governments wishing to share PRTR data on a <u>regional</u> basis need to include certain design components so that data are comparable e.g., C-A-S or IUPAC chemical identifiers, SIC or ISIC codes, common units for weights and measures, similar reporting time periods and the geographic location of reporting firms.

- Accessibility of data to the public could create friction with the tradition of secrecy in many countries of this region. Industry, government and non-governmental organisations alike will need to work together to overcome this barrier. <u>Consultations with affected and interested</u> parties and <u>transparency</u> of the development process could be vitally important to countries developing a PRTR in the CEE and NIS region. In addition, a well-planned <u>data dissemination and training strategy</u> could help ensure stakeholders are aware of the data and information available and assist reporters in knowing how to report.

- Experience of governments which are developing or operating a PRTR system played an important role in providing practical information about PRTR design and development to participants from CEECs and the NIS. There is a fundamental role for government officials from OECD countries experienced in establishing a PRTR to provide <u>outreach and training assistance</u> to governments embarking on a PRTR design project.

Conclusion

Collecting cross-media environmental data on releases of priority pollutants can provide governments with important integrated pollution information that is currently lacking. National PRTRs could provide valuable information to governments to help them assess the state of their environment and formulate national environmental action plans and other national environmental policies and strategies.

This summary report will highlight key points or themes raised during the three day workshop. It is meant to assist governments, in tandem with the OECD PRTR Guidance Manual, wishing to establish a PRTR.

I. Background

Efficient environmental policy requires sufficient knowledge of pollutants released or transferred. Having only some of the necessary information can leave governments ill-prepared to establish clear and competent programmes. To fully understand the impact of pollutants released and transferred to the environment, data are needed concerning the identities of pollutants, the amounts released or transferred, the potential risks posed to man and the environment and the sources of these releases --in particular the exact locations of these sources.

The importance of a Pollutant Release and Transfer Register is addressed in Chapter 19 of Agenda 21 (from the United Nations Conference on Environment and Development - UNCED). Chapter 19 emphasises an approach governments could take to collect important release and transfer data of potentially hazardous pollutants in a register format while Principle 10 of the Rio Declaration, addresses the need to provide public access to these data.

The positive experiences of the countries that have implemented PRTR systems has stimulated many other governments to take action to develop and implement a PRTR. The wide range of benefits and uses of a PRTR system also prompted OECD, in conjunction with UNITAR and UNEP, to sponsor this workshop to introduce and to share with governments of Central and Eastern Europe and the New Independent States, a valuable instrument for environmental management.

Workshop Objectives

The workshop had the following objectives:

- To facilitate the understanding of Pollutant Release and Transfer Registers and how they can contribute to national environmental management;
- To provide advice on the role and value of PRTRs as a tool for environmental policy and sustainable development;
- To discuss the potential uses of a PRTR in this region and the challenges to and opportunities for introducing a system which fits national needs;
- To illustrate, through practical examples and experience, how PRTRs can be designed; and
- To acquaint countries with opportunities for possible PRTR follow-up activities at the national level.

PRTR Guidance for Governments Manual

In February 1996, OECD published a Guidance Manual for governments seeking to establish a PRTR (OCDE/GD(96)32)[2]. This document, which was used as the basic text for the workshop, was developed through a series of earlier workshops attended by representatives of all stakeholder groups.

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[2] The PRTR Guidance Manual is available in English, French, Japanese, Russian and Spanish.

UNITAR Guidance

The United Nations Institute for Training and Research (UNITAR) has developed guidance and information to help build capacity within governments seeking to design a national PRTR. UNITAR has conducted three PRTR pilot projects from 1994-1995 in Egypt, the Czech Republic and Mexico. These pilot projects provided information on how a country would approach, design and integrate a PRTR. From this, a series of documents which complement the OECD Guidance Manual, have been developed and are available to assist nations wishing to develop a system. A list of documents available from UNITAR can be found in Annex III.

II. Summary of Workshop Sessions

The workshop was opened by the Deputy Minister of the Ministry of Environment of the Czech Republic, Mr. Vladislav Bisek. He described the environmental situation in the Czech Republic, expressed his support for PRTRs and explained the advantages his country could reap from implementing a system. It was also mentioned that the Czech Republic had just completed its second PRTR pilot study and expects to soon develop a register based on the outcomes of this work.

Introductory remarks by representatives of OECD, UNITAR and UNEP, highlighted key aspects of a PRTR and its valuable role in environmental management. One important element discussed was the work completed by international organisations in developing guidance and outreach tools for governments considering implementing a PRTR programme. The remainder of the workshop was a mix of plenary and working group sessions. The main themes and outcomes from these sessions are summarised below.

Current situation: Central and Eastern Europe and the New Independent States Region

The second session of the workshop aimed to define particular environmental problems, within countries of the region and to clarify national and regional priorities for addressing these problems. Several speakers from the region described the specific health, environmental, infrastructure and economic issues within their country. This information helped to form a foundation for the workshop itself.

The uniqueness of transitional (or as one speaker mentioned, "redeveloping") economies presents a particular set of issues and challenges for developing a PRTR system. Environmental problems range from severe to critical and the degree of progress in assessing the problems, or in taking steps to remedy them, varied considerably from country-to-country. Of key importance is that efforts to address environmental problems are limited by the lack of technical and financial resources and changing political priorities.

It is possible to categorise the countries of the region into two sub-regions based on similar environmental situations and economic, social and/or political infrastructures. These are: Central and Eastern Europe and the New Independent States. Depending on the sub-region, the starting point for a PRTR, its design and scope will differ. For instance, in many Central and Eastern European countries, the infrastructure is stabilising and resources are available to help governments assess current environmental problems and create programmes to address priority issues and pollutants. On the other hand, the infrastructure in most NIS countries is still fluid and economically unstable making environmental planning and action less comprehensive and more difficult. Consequently, actions are usually reactionary, focused upon the most severe or critical environmental troubles.

Benefits and uses

There are a wide-range of ways PRTR data could be used and numerous benefits that can be derived from these data. Speakers from countries with operating PRTRs emphasised that uses and benefits expand and evolve over time as does the user base. For instance, some governments found that other Ministries and agencies use integrated pollution data for a variety of reasons. In addition, organisations such as financial institutions, insurance companies, real estate companies and local governments have become regular users of PRTR data.

As investment in countries in the region grows, new plants and facilities will be built and new industries launched. Data from a PRTR can help guide national and local governments with underline strategic land-use planning by providing information about the pollution load, and location of similar types of industry and releases.

A PRTR can also be used to help underline refine pollution reduction priorities and targets by providing information on the performance of specific programmes and by indicating where reductions may need to be made and from which industries, sectors or geographical locations (e.g. near a critical aquifer, etc.). Resources could therefore be used more effectively.

Governments of CEE and the NIS are highly concerned about meeting industrial standards and norms and fulfilling requirements of international environmental agreements, conventions and treaties. A PRTR can provide a underline template for collecting cross-media data and provide governments with a tool to track and measure progress in meeting international standards and guidelines (for example, ISO 14000, European Union standards, international conventions, etc.). For those countries considering applying the European Union's Eco-Management and Audit System, a PRTR could be instrumental in indicating performance made by using certain pollution prevention measures.

A PRTR can play a central role in helping enterprises create a pollution tracking or performance measurement system as part of a firm's internal environmental audit programmes. Conversely, if a firm has an audit system in place, the addition of a component to collect PRTR data is relatively simple.

Other benefits of PRTR results noted as being particularly important to countries in CEE and the NIS include:

- Data could be used to indicate potential environmental problems or hazards before they reach a critical point, e.g. hotspots;

- Measuring progress of voluntary industry pollution reduction programmes;

- Providing data to identify transfrontier environmental issues that are of common concern for countries sharing borders or natural resources;

- Encouraging productive dialogue between government, industry and the public and forging better partnerships between each group; and

- Increasing worker knowledge and understanding of their plant and its releases.

Challenges

During the working group sessions, several key challenges to implementing a PRTR in the CEE and NIS regions were identified. A list of such challenges can be found in Box 1.

One important challenge participants often referred to is the perceived resistance by industry to report PRTR type data due to a tradition of secrecy. Representatives from countries

with operating PRTR systems noted that they found that consultations with affected and interested parties, enhanced the design of, and overall support for, a system.

Some workshop participants were apprehensive about the public disclosure of PRTR data. Again, this was due in part to a long history of closed systems and lack of publicly available information creating an air of uncertainty as to how the public would react to such a disclosure. Participants from countries with an operational PRTR emphasised that none had experienced significant problems from the release of data to the public. To help avoid any problems, consultations with affected and interested parties as the system is designed was highly recommended. Doing this can help build a positive relationship and greater understanding among stakeholders and encourage everyone to work together to further national environmental priorities.

Box 1

Challenges to Implementing a PRTR in the CEE/NIS Region

- Working under unstable economies, changing political systems and shifting leadership can affect the establishment of a PRTR and maintaining its operation so that valid and consistent data are obtained;
- Finding adequate resources to develop and implement a PRTR when there is a deficit of human, technical and financial resources;
- Changing the tradition set by industry of not providing pollution data or information to government;
- Gaining knowledge on which pollutants are in commerce and those being released and/or transferred to the environment. (This information is imperative if a list of chemicals or pollutants is to be established.);
- Overcoming the habit of not releasing information to the public;
- Addressing the fears of industry and government that pollutant release and transfer data disseminated to the public would create chaos and problems; and
- Identifying and harmonising other existing data reporting schemes to avoid duplicative reporting.

Cleaner Production and Pollution Prevention

As a priority, many CEEC and NIS are seeking to apply cleaner production techniques and technologies to reduce pollution at the source. With cleaner production being a vital part of the environmental strategy of the CEE and NIS region, governments agreed that the goal of cleaner production/technologies should be an integral part of the design and development of national PRTR systems in this region.

For industry, PRTR data creates bench-marking opportunities within the same branch or sector. Data from a PRTR creates an opportunity to focus on, and facilitate the development of prevention and source-oriented approaches so as to reduce the reliance on reactive and end-of-pipe solutions. It was emphasised that collecting PRTR data helps to identify wasted resources and provide firms with data and information to target pollution reduction, recovery, re-use and recycling opportunities. The net result could be more efficient use and allocation of scare resources. This could mean cost savings by indicating where material loss and wastes could be reduced.

PRTR Design

A main point derived from workshop presentations is that a <u>PRTR is a national system</u> based on the environmental goals and circumstances of each country: <u>one size, type or design does not fit all</u>. However, there are several common features present in all PRTR which form the backbone of a system. These are:

- list of chemicals or pollutants;
- multi-media or integrated reporting;
- reports are site-specific;
- reports submitted on a periodic basis (usually annually); and
- data are available to the public.

Most OECD governments with an operating PRTR initially had separate data collection systems for air pollutants, water pollutants, waste and so forth. This kind of disparate data made it difficult to retrieve or cross-reference information critically needed to properly manage certain environmental programmes. Many countries represented at the workshop experienced the same problem. Therefore, a key first step in the PRTR design process is to <u>streamline and integrate other pollution data reporting systems</u>.

The basic design structure for a national PRTR was described by participants with an operational PRTR. The key design components of these systems are listed in Box 2.

Box 2
Key Components of a PRTR

- Clear goals and objectives;
- Consultations with affected and interested parties on the design;
- Specific chemical species or pollutants in lieu of broad categories;
- Information reported by facility (with a geographic identifier for point sources);
- Disclosing data and information to the public (while taking into account the needs of
firms to protect national confidential business information); and
- Validating data received.

Three additional points concerning PRTR design emphasised by speakers, and directed towards governments in the CEE and NIS region wishing to establish a PRTR, are that governments should: (1) <u>start simply</u>, (2) ensure that <u>data are compatible and comparable</u> with other internal sources*,* and (3) <u>train reporters and users</u>.

<u>Basic elements</u>

Governments seeking to share data on a regional basis should take into account the need to use certain data elements to ensure data and information can be comparable. Basic data elements would include the use of C-A-S or IUPAC chemical identifiers, SIC or ISIC codes to classify the type of industry reporting, common units of weights and measures (kilograms, tonnes, etc.), agreed measuring and estimation techniques, and the time period covered by the report.

<u>Test studies</u>

A test study or pilot project, such as those carried out in the Czech Republic, Australia and Mexico, can provide a valuable vehicle for designing a system. It allows designers to test the proposed PRTR on a small scale and then make modifications or adjustments as necessary. A test study also provides a good opportunity to build support and understanding of the system and its uses with all affected and interested parties.

Outreach

Representatives from countries with operating PRTRs shared their experiences in implementing a PRTR and explained how they addressed various challenges while developing their systems. This information bridged the gap between theoretical discussions and practical applications of a PRTR. The <u>continuation of outreach</u> and support by OECD Member countries could have tremendous value to governments seeking to establish a PRTR system. There are many ways in which this could be realised, including such things as a country-to-country exchange programme, and training and direct assistance, either as part of a OECD Member country assistance network, or as part of an international expert team.

Capacity Building Opportunities

To help those countries interested in establishing a PRTR, representatives from several international organisations provided information on the <u>assistance and information available for designing a PRTR</u> and possible approaches to help build capacity to operate a system. These representatives also provided information on current and upcoming PRTR activities.

UNITAR, having conducted three pilot PRTR development projects, discussed the documents it has developed including those on designing a PRTR and establishing a national co-ordination team. UNIDO and UNEP mentioned the Cleaner Production Centres in the region (Czech Republic, Slovakia, and Hungary) where industry could seek assistance for designing an environmental management system with a PRTR reporting template built into the system. The Regional Environmental Center (REC) discussed its training centres located throughout CEE and described the newsletters and bulletins it produces for countries to share progress and information. The REC can be instrumental in helping build capacity in CEEC and in sharing information about PRTR activities.

Finally, UNITAR mentioned a programme it established for hands-on assistance to those countries committed to developing a PRTR system: of course funding would need to be secured through traditional sources and donors. Further dialogue with UNITAR would be the necessary first step.

III. Conclusion

The inherent diversity and adaptability of a PRTR is what enables it to be such a valuable and versatile tool for managing the environment. A PRTR can provide key information to fill existing information gaps, determine trends and to help identify potential risks. Moreover, relative to other regulatory regimes, a PRTR can be designed to be more resource efficient and actually help to increase the efficiency of other regulatory programmes by indicating performance.

The benefits and advantages of a PRTR are echoed throughout this report. Nevertheless, knowing the benefits and having the means to design and implement a system could require special technical assistance from countries with an operating system or from international resources such as those available through the Regional Environmental Center, UNITAR, UNEP and UNIDO. For governments wishing to establish a PRTR, first steps include: (1) examining operating environmental reporting information systems, and (2) assessing chemicals in commerce. Once these steps are completed governments would need to set goals and objectives for a system, identify the scope and draw up a list of priority pollutants. At this point, the OECD Guidance Manual and the UNITAR materials would be able to help guide a government in developing a PRTR.

ANNEX IV

What is a Pollutant Release and Transfer Register?

A Pollutant Release and Transfer Register (PRTR) is a database or catalogue of potentially harmful <u>releases of pollutants to air, water and soil</u> as well as wastes transported to treatment and disposal sites. It includes information on <u>who</u> is releasing the pollutant and over what <u>time</u> period. The register consists of reports about releases of <u>specific chemical species</u> such as benzene, methane, or mercury as contrasted with reports on broad categories of substances such as volatile organic compounds, greenhouse gases or heavy metals. A PRTR, adapted to national environmental priorities, can provide a means to <u>track the generation</u>, <u>release</u> and <u>fate</u> of pollutants over time.

A register can be very effective in identifying progress of environmental policy and regulations, and in indicating areas of policy needs that can be used for setting priorities for risk reduction by providing otherwise difficult-to-obtain information about pollution burden. In addition, it can be an important component of a governments overall environmental policy – encouraging reporters to reduce pollution, and engendering broad public support for government environmental policies. It also allows governments to have in one place, data and information concerning the quantity of a pollutant released and to which media, who is generating the pollutant, as well as the total amount released to all environmental media and the geographic distribution of releases and transfers.

Increasingly, governments are setting longer-term national environmental goals to promote pollution prevention and sustainable development. A PRTR is a practical tool which can provide key data and information on progress so governments can examine objectively how well these goals are being met. As such, it is an instrument for promoting efficient and effective policies for environmental protection and sustainable development.

ANNEX V

Guiding principles[3]

Basic guiding principles underlie the establishment of an effective PRTR system. Several of the guiding principles were specifically emphasised at the workshop. Countries in the CEE and NIS region planning to establish a PRTR need to take these principles into account.

The key principles of a PRTR underscored during the workshop were:

1) PRTR systems should provide data to support the identification and assessment of possible risks to humans and the environment by indicating the sources and amounts of potentially harmful releases and transfers to all environmental media.

2) In designing or modifying a PRTR system, government should consult with affected and interested parties to develop a set of goals and objectives for the system.

3) A register should cover an appropriate number of substances which may be potentially harmful to humans and/or the environment when released or transferred.

4) A PRTR should include both public and private sectors as appropriate: facilities which might release and/or transfer a substance of interest and if appropriate, diffuse sources.

5) To reduce duplicative reporting, a PRTR system should be integrated to the degree practicable with existing information sources such as licences or permits.

6) Both voluntary and mandatory reporting mechanisms for providing PRTR inputs should be considered with a view as to how best to meet national goals and objectives of the system.

7) The results of a PRTR should be made accessible to all affected and interested parties on a timely and regular basis.

8) PRTR data should be used to promote prevention of pollution at the source, e.g. by encouraging cleaner production.

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[3] These principles represent a subset of the basic principles for establishing a PRTR found in the OECD "Pollutant Release and Transfer Registers (PRTRs) Guidance Manual for Governments", OECD/GD(96)32, 1996.