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**Intergovernmental negotiating committee
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**Preparation of a global legally binding instrument
on mercury**

**Pollutant release and transfer registers as a reporting
mechanism for mercury releases and transfers**

Note by the secretariat

The secretariat has the honour to provide, in the annex to the present note, information on pollutant release and transfer registers as a reporting mechanism for mercury releases and transfers, as submitted by the International Pollutant Release and Transfer Register Coordinating Group in consultation with the Task Force on Pollutant Release and Transfer Registers of the Organization for Economic Cooperation and Development. The information has been reproduced as received, without formal editing.

* UNEP(DTIE)/Hg/INC.2/1.

Annex

Information document on pollutant release and transfer registers as a reporting mechanism for mercury releases and transfers

1. This information document was developed for the Second Meeting of the Intergovernmental Negotiating Committee on Mercury by the International Pollutant Release and Transfer Register (PRTR) Coordinating Group and in consultation with the OECD PRTR Task Force. The Coordinating Group's overall objective is to improve coordination between international organizations, governments and other interested parties in ongoing and planned efforts related to the further development and implementation of PRTR systems. The Coordinating Group serves to promote capacity-building for PRTR systems in developing countries and countries with economies in transition through intergovernmental coordination. The United Nations Environment Programme (UNEP), United Nations Institute for Training and Research (UNITAR), United Nations Economic Commission for Europe (UNECE) and Environment Canada serve on the Bureau of the International PRTR Coordinating Group. The UNECE Aarhus Convention Secretariat also serves as secretariat.

PRTRs – A brief Overview

2. A Pollutant Release and Transfer Register (PRTR) is a national or regional environmental database or inventory of hazardous chemical substances and other pollutants released to air, water and soil, and transferred off-site for treatment or disposal¹. The register can include data on specific substances as well as broad categories of pollutants. Data from point sources as well as diffuse sources can be entered into the register and is usually reported and gathered on a periodic basis, typically annually. Data is gathered or estimated through different means; direct measurements of effluent streams, mass balance calculations, emissions estimation methodologies and engineering calculations are all among the methods used to provide PRTR data.

3. PRTRs are thus inventories of pollutant emissions and transfers from industrial sites and other sources arising from anthropogenic activities. The development and implementation of a national PRTR system represents a means for governments to track the generation and release and also the fate of various chemicals and pollutants over time. Public access to information is a central PRTR characteristic, and indeed contributes to the prevention and reduction of environmental pollution. Thus although a PRTR does not directly regulate emissions, it assists companies to monitor and track the pollutants they produce, encourages them to adopt cleaner production methods and it provides incentive for facilities to take voluntary measures to reduce emissions.

4. Perhaps most importantly, PRTRs increase the public's knowledge of, and access to, information on the release quantities (and other waste management activities) for toxic chemicals in their communities. These data provide the public with knowledge on the dispositions of toxic chemicals in their communities, and help enable citizens to make informed decisions regarding the consequences of such dispositions. PRTR data are also often used by federal, state and local governments for prioritization purposes.

5. Historically, PRTRs started in the United States in the mid 1980's following the tragic industrial accident in Bhopal, India. The legislative measure which emerged established the Toxics Release Inventory (TRI), a register which in the US today tracks over 600 chemicals in releases to air, land and water and transfers to off-site treatment or disposal facilities. To date, at least 25 countries have some form of a fully functioning PRTR Program underway². This number is expected to increase significantly over the next few years, as many more are in the process of developing their national reporting system, including all those countries of the European Union who will be reporting under the EU-wide European-PRTR system (E-PRTR).

6. PRTRs have proven to be effective environmental management tools and to provide benefits to national stakeholders. Addressing chemicals wastes, awareness raising, prioritization of sources of chemicals and facilitating national inventories are natural uses of PRTRs. They provide multiple functions, for example:

- Regularly gather data for major pollutants, including mercury;

1 OECD, Pollutant Release and Transfer Registers (PRTRs): A Tool for Environmental Policy and Sustainable Development. Guidance Manual for Governments, Paris, 1996, available at: <https://www.oecd.org/dataoecd/36/32/2348006.pdf>.

2 From PRTR.net (<http://www.prtr.net>) and recent research

- Reduce costs to government and industry from a coordinated reporting system;
 - Hold and process data to allow updating/tracking of releases;
 - Facilitate countries to prioritize mercury release reduction efforts;
 - Provide a portal for information to civil society facilitating public communication and increased awareness of pollutant issues;
 - Provide comprehensive data for reporting on releases and tracking of hazardous chemicals and for identifying priority chemicals management areas in national action plans;
 - Promote cleaner production initiatives in industries;
 - Tracking trends in mercury and other chemicals' emissions
7. PRTRs thus offer an established reporting network on emissions and transfers in many countries, a developing network in others and in general a proven and widely established mechanism for collecting emissions and transfer data.

PRTRs and Mercury

8. With respect to reporting of releases of mercury within PRTRs, all established PRTRs and all those under development include mercury and its compounds as substances to be reported.³ National PRTRs typically require reporting from the classes of facilities which are major emitters of mercury and thus provide information on primary and to a lesser extent secondary anthropogenic emissions of mercury, including fossil fuel combustion installations (power plants and residential and commercial boilers), non-ferrous metal, cement and pig iron and steel production, waste incineration, primary mercury production, crematoria and mining operations.

9. Sources of global mercury emissions can be categorized as arising from primary natural sources (e.g. volcanic and geothermal activity), primary anthropogenic sources (e.g. fossil fuel combustion, primary metallurgical operations, cement production) and secondary anthropogenic sources (e.g. mercury contained in products or released through industrial processes)⁴. PRTRs do not address natural mercury sources and currently do not comprehensively capture mercury emissions arising from product use and disposal, although efforts have begun on the issue of hazardous substance releases during product use. Also, while PRTRs can provide a good overview of regulated productive activities and products, they can provide only estimated information on non-regulated mercury activities (e.g. small scale mining): release estimation techniques must be developed and applied for such non-reported emissions.

10. Quantities of released or transferred mercury may be determined through various techniques, as described in the overview above. Significantly, numerous release estimation methodologies already exist for major mercury-emitting activities to assist in quantifying releases. Lastly, with respect to transfers – a significant issue in consideration of the permanent mercury repositories currently being investigated – a fundamental PRTR function is to provide information on movements of mercury from one holder to another, such as from a facility generating mercury wastes to one designed for long-term waste storage.

11. UNEP Governing Council Decision 25/5 (III) specifically requests that an International Negotiating Committee be convened with the mandate of developing a global legally binding instrument on mercury. In paragraph 27 of that Decision it agrees that the Committee should consider *inter alia* provisions to reduce atmospheric emissions of mercury, to address compliance, to address mercury containing waste and to increase knowledge through awareness raising and scientific

3 The UNECE Protocol on PRTR thresholds by facility for reporting releases of mercury and mercury compounds to air is 10 kg/yr; for releases to water and land, 1 kg/yr; for off-site transfers as waste, 5 kg/yr.; and for manufacture, process or use (MPU), 5 kg/yr.

The US EPA, in recognition of the fact that mercury metal and mercury compounds are highly persistent, highly bioaccumulative toxic chemicals, in 1999 lowered the reporting threshold for these to 10 lb/yr (~5 kg/yr). This TRI PBT rule (and the related facilities expansion rule of 1997) have resulted in increased reporting of the quantities of mercury disposed or otherwise managed as waste within the US, and has greatly increased the US EPA's and the public's ability to keep track of anthropogenic mercury emissions in the environment, and make informed decisions about mercury.

4 UNEP, Global Mercury Assessment report, 2002; <http://www.chem.unep.ch/mercury/Report/Final%20Assessment%20report.htm>

information exchange. Paragraph 28 further agrees that the Committee should consider inter alia prioritization of the various sources of mercury releases for action, as well as the need to achieve cooperation and coordination with relevant provisions contained in other international agreements and processes. Paragraph 29 of the Decision requests the Executive Director to conduct a study to inform the Committee on various types of mercury emitting sources and current and future trends in mercury emissions.

Specifically looking to a global legally-binding instrument on mercury, PRTRs offer the potential to:

- Enhance and consolidate national mercury emissions inventories;
- Provide reliable information on anthropogenic mercury emissions at the facility, state (regional) and national level;
- Inform on location and quantities (measured and/or estimated) of mercury used and mercury wastes;
- Identify hot-spots on mercury emissions;
- Provide information on emissions trends over the years;
- Facilitate access to updated information on mercury emissions;
- Facilitate stakeholders involvement through the inherent participation of stakeholders in the PRTR development process;
- Assist countries to comply with foreseen reporting requirements of the treaty; and
- Serve as a practical basis from which the effectiveness of voluntary and regulatory actions intended to decrease mercury emissions can be assessed.

International Policy Framework on PRTR Development

12. Many of the milestone global environmental agreements have recognized and endorsed the multi-stakeholder approach of PRTRs as an effective mechanism in achieving their goals, including the Stockholm Convention on Persistent Organic Pollutants, the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters and the Strategic Approach to International Chemicals Management (SAICM). All three of these Agreements are associated with PRTR projects currently underway in developing countries.

International PRTR Activities

13. International cooperation of activities in PRTRs has been extensive for years, through formal cooperative groups such as the OECD PRTR Task Force, the North American Commission for Environmental Cooperation, the International PRTR Coordinating Group and the Working Group on PRTR Protocol to the Aarhus Convention. Following the recent entry into force of the PRTR Protocol on 8 October, 2009 the first Meeting of the Parties to the Protocol (MOPP) was held on 19-22 April 2010 in Geneva.

14. The OECD PRTR Task Force was established in 2002 and facilitates a wide range of activities amongst OECD members; it is arguably today the most active forum for international PRTR collaboration. Extensive bilateral cooperation between States and capacity-building, training and development of guidance through the community of Intergovernmental Organizations (IGOs) and NGOs have also been ongoing for many years. These forums and the resulting network of PRTR experts and stakeholders represent a unique resource capable of approaching the many complex issues related to quantification of pollutant burdens on the environment.

15. Activities which illustrate the potential for PRTR systems to be employed in reporting under multilateral environmental agreements (MEAs) include the project “Persistent Organic Pollutants (POPs) monitoring, reporting and information dissemination using pollutant release and transfer registers (PRTRs)” currently underway in seven countries (Chile, Cambodia, Ecuador, Kazakhstan, Peru, Thailand and Ukraine). UNEP is the implementing agency for this GEF-supported project with UNITAR serving as the executing agency. The project is ending in December 2012 and it is expected that each country will have a PRTR designed and that Chile will have made a demonstration on how to best use a PRTR for POPs reporting.

16. Other projects that illustrate this potential utility of PRTR towards mercury reporting are the three pilot projects on Strengthening Inventory Development and Risk Management-Decision Making for Mercury: A Contribution to the Global Mercury Partnership implemented in Chile, Ecuador and Panama on September 2007-October 2008. These projects were executed with financial support from US EPA and technical support of UNITAR. This project included the development of national mercury emissions inventories, a mercury risk management plan and a strategy to institutionalize mercury reporting through a national PRTR. Among the working areas and challenges identified, participants noted mercury in diffuse sources, mercury in products and assessments of mercury related risks. According to experiences during the implementation of these projects, further discussions would be needed on how mercury in products could be reported in a PRTR.

17. Related to the above project is a study in six Central American countries (Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras and Nicaragua) on the feasibility of a PRTR system as a regional reporting system for chemicals management. Under the SAICM Quick Start Programme, the project Strengthening Capacities for Developing a National PRTR and Supporting SAICM Implementation is being implemented in Georgia.

18. The UN / Economic Commission for Europe maintains a database of capacity building and other PRTR related activities. This resource can be searched online.⁵

19. Some of the above-mentioned projects will allow countries to comply with Stockholm Convention requirements on updating implementation plans (Article 7), exchanging information (article 9), facilitating public information, awareness and education (article 10) and reporting to the Secretariat (Article 15). Article 10 explicitly acknowledges the value of PRTRs for these purposes.

20. In conclusion, PRTRs offer an established, proven multi-stakeholder mechanism capable of providing periodic and reliable data on releases and transfers of pollutants of national priority, including mercury, and responding to the needs mandated by UNEP Governing Council Decision 25/5 (2009). They could be foreseen as an integral part of the eventual mercury-emissions reporting and tracking which would be an anticipated element of a global instrument on mercury. The members of the International PRTR Coordinating Group would welcome the opportunity to participate in the INC process and to discuss and promote the potential for PRTRs as a reporting mechanism for mercury.

5 <http://apps.unece.org/ehlm/pp/NIR/RLsearch.asp>