

Consultation on the implementation of the UNECE Protocol on PRTRs

1. Introduction

- 1.1 This is a consultation paper on the implementation of the United Nations Economic Commission for Europe (UNECE) Protocol on Pollutant Release and Transfer Registers (PRTRs). The Protocol provides for the establishment of national PRTRs to facilitate public participation in environmental decision-making as well as contribute to the prevention and reduction of pollution of the environment.
- 1.2 The purpose of this consultation paper is to outline the proposed implementation of the UNECE Protocol on PRTRs in Ireland and to seek the views of stakeholders. Comments are invited on any aspect of this document and **comments must be received at the latest by Wednesday, 17 December 2008.**
- 1.3 A copy of this consultation paper is available on the Department's website (www.environ.ie) and on the EPA's website (www.epa.ie). A copy of the UNECE Protocol is also available on these websites as well as on the UNECE's website (www.unece.org/env/pp/prtr.htm). Other documents relating to this consultation document and the Protocol such as Regulation 166/2006 and the European Communities (European Pollutant Release and Transfer Register) Regulations 2007 (S.I. No. 123 of 2007) are available on the Department's and the EPA's websites. Other websites which provide useful information on this subject matter include: www.eper.ec.europa.eu/eper; www.prtr.net; and www.europa.eu/scadplus/leg/en/lvb/l28149.htm.

2. What is a PRTR?

- 2.1 A PRTR (Pollutant Release and Transfer Register) is a national or regional environmental database or inventory of potentially hazardous chemical substances and/or pollutants released to air, water and soil, and transferred off-site for treatment or disposal.
- 2.2 The relevant industry or business facilities quantify and report the amounts of substances released to each environmental medium (air, water, soil) or transferred off-site for waste management or wastewater treatment. Some PRTRs also include estimates of releases from diffuse sources, such as agriculture and transport and from the end use of products. National PRTRs may vary in terms of the hazardous chemicals and pollutants reported, industry or business facilities that must report, and the destination of releases.
- 2.3 Although a PRTR does not directly regulate emissions, it creates an incentive for industry or business facilities to avoid being identified as major emitters and provides an incentive for facilities to invest so as to reduce emissions.

3. Background to the UNECE Protocol on PRTRs

- 3.1 The United Nations Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters was opened for signature in Aarhus on 25 June 1998 and came into force on 30 October 2001. Article 5, paragraph 9 of the Aarhus Convention pledges Parties to establish a "system of pollution inventories or registers". The UNECE Protocol is a response to that pledge and is related to the Convention.
- 3.2 In May 2003, 36 countries and the European Community signed the UNECE Protocol on PRTRs in Kiev. At that time, Ireland signed the Protocol, subject to ratification. All States can sign up to the Protocol, including those that have not ratified the Aarhus Convention and are not members of the UNECE. So, by design, the Protocol is an "open", global protocol. Ratification of the Protocol is independent of ratification of the Aarhus Convention.
- 3.3 The Protocol will enter into force on the 90th day after the date of deposit of the 16th instrument of ratification. To date, 7 Parties (excluding the European Commission) have deposited their instruments of ratification. The Protocol will enter into force for Ireland when Ireland ratifies the Protocol and when the Protocol enters into force. It should be noted that both such events may not occur at the same time - the Protocol could enter into force internationally but not in Ireland (i.e. where Ireland has not ratified the Protocol); or Ireland could ratify the Protocol but the Protocol may not have entered into force in Ireland (i.e. where the 16 instruments of ratification have not been deposited).

4. UNECE Protocol on PRTRs and its Objectives

- 4.1 The UNECE Protocol on PRTRs is the first legally binding international instrument on PRTRs. Its objectives are to enhance public access to information on the environment, to facilitate public participation, and to contribute to pollution prevention and reduction.
- 4.2 The Protocol provides for the establishment of integrated PRTRs to:
- provide public access to information on pollutants released into, and transferred in and through, communities;
 - act as a cost-effective tool for encouraging improvements in environmental performance; and
 - be of use to Governments in tracking trends, demonstrating progress in pollution reduction, monitoring compliance with certain international agreements, setting priorities and evaluating progress achieved through environmental policies and programmes.
- 4.3 The Protocol requires Parties to it to establish nationwide systems that report and collect emissions and waste transfers information and it identifies a series of core elements for PRTRs. The Protocol addresses the design and structure of PRTRs and their scope. It also outlines the reporting requirements and reporting cycle for operators and Parties. It addresses data collection, record keeping and quality

assessment issues. In addition, public participation, access to information, and access to justice are also provided for in the Protocol.

5. European System

EPER

- 5.1 Prior to the adoption of the UNECE Protocol on PRTRs, the European Union had already adopted its own system - the European Pollutant Emission Register (EPER). This was established in the context of the Integrated Pollution Prevention and Control (IPPC) Directive. EPER was the first register of emissions from industrial activities i.e. those activities coming within the scope of the IPPC Directive. Under the EPER, Member States reported every 3 years on the emissions (above a certain threshold) into air and water of industrial activities (of a certain capacity) regulated under the IPPC Directive. The European Commission subsequently published the data on its website (www.eper.ec.europa.eu/eper). The latest year for which data was published was 2004 and such data was provided by Member States in June 2006.

E-PRTR

- 5.2 The European Community signed the UNECE Protocol on PRTRs and subsequently upgraded EPER to a European PRTR (E-PRTR). This was published as Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006¹. This Regulation 166/2006 (E-PRTR Regulation) entered into force on 24 February 2006 and is binding on Member States. The E-PRTR Regulation sets up a PRTR at EU level in the form of a publicly accessible electronic database. The E-PRTR Regulation requires Member States to provide for the gathering of information at national level and to report the data electronically to the Commission. In addition, the E-PRTR Regulation requires Member States to provide for penalties for infringements of the Regulation.
- 5.3 The E-PRTR will contain information on releases of pollutants to air, water and land, as well as transfers of waste and pollutants, where emissions exceed certain threshold values and results from specific activities. The E-PRTR is more comprehensive than EPER in that it provides for reporting on a greater number of pollutants and it includes reporting on releases to land, releases from diffuse sources and off-site transfers of waste. The pollutants and the relevant thresholds for release to air, water and land are detailed in Annex II of the E-PRTR Regulation. This list of 91 pollutants exceeds the list covered by the Protocol as the E-PRTR Regulation takes account of existing EU legislation on water and persistent organic pollutants. The list of pollutants covered by the E-PRTR Regulation and the Protocol are outlined at Appendix 1 to this document.
- 5.4 Most of the activities covered by E-PRTR were covered by its predecessor EPER but some additional activities are now included in E-PRTR and these activities are not covered by the IPPC Directive. The full list of activities covered by E-PRTR is detailed in Annex I of the E-PRTR Regulation and in Appendix 2 to this document. This is the same list of activities covered by the Protocol but, unlike the Protocol, the E-PRTR Regulation does not specify an employee threshold for the activities. The

¹ OJ No. L.33, 4.2.2006, p.1.

activities are those in the following sectors: energy; production and processing of metals; mineral industry; chemical industry; waste and waste water management; paper and wood production and processing; intensive livestock production; and animal and vegetable products from the food and beverage sector. Those activities that are new to EPER/E-PRTR are highlighted, and include opencast mining and quarrying, urban waste water treatment plants, aquaculture, and shipbuilding and maintenance.

- 5.5 The E-PRTR and its predecessor, (EPER) are effectively an inventory of emissions from specific activities which have exceeded the reporting threshold for specific pollutants. It is not an inventory of emissions generally, nor is it a register of breaches of licences or otherwise.
- 5.6 The EU E-PRTR Regulation is designed to meet the provisions of the Protocol. However, the deadlines for reporting information in the E-PRTR Regulation are shorter than those in the Protocol. In addition, the E-PRTR Regulation does not address all aspects of the Protocol, most notably the establishment of a publicly accessible national PRTR.

6. Data on Irish Emissions

- 6.1 Integrated Pollution Prevention and Control (IPPC) and waste licensed activities are required, as a condition of their licence, to submit to the Environmental Protection Agency (EPA) a single annual report on the environmental performance of the activity. This Annual Environmental Report (AER) provides details of monitoring results for emissions and other information relating to the operation of the licensed activity. Currently, licensees submit the AERs in paper format and these are publicly accessible at the EPA's Offices. Arrangements are being made with licensees for the submission of AERs in both paper and in electronic format. The EPA will arrange to publish the AERs on their website. This will be effective in 2009 and in respect of AERs for 2008. It is recognised that the release of this data will relate only to a specific facility and will not display how this facility compares with other facilities of similar type and size in Ireland and elsewhere.
- 6.2 Data supplied by IPPC and waste licensed activities in response to EPER (referred to above) was provided by the EPA to the European Commission. The latest data was in respect of 2004 and was provided to EPER in June 2006. Summary details of the information is provided on the EPA's website and the full set of data for Ireland is available through EPER's website, www.eper.ec.europa.eu/eper.
- 6.3 In accordance with the Environmental Protection Agency Act 1992, as amended, the EPA monitors environmental quality and establishes databases to which the public have access. Such databases are available on the EPA's website and provide details in relation to air quality, groundwater, lakes, rivers, transitional and coastal waters, drinking water and bathing water.

7. Implementation of the UNECE Protocol on PRTRs in Ireland

7.1 In order to ratify the UNECE Protocol on PRTRs, Ireland must first fulfil its obligations under the Protocol and then fulfil any relevant Constitutional issues that may arise. This paper concerns the Protocol obligations and does not address the Constitutional issues as these will be addressed when the Protocol obligations are fulfilled.

7.2 Certain aspects of the Protocol are implemented by the provisions of the E-PRTR Regulation and as a Member State, Ireland is required to fulfil these EU obligations before considering any other Protocol obligations. As a signatory state to the Protocol, Ireland is required to fulfil any other Protocol obligations not embraced by the E-PRTR Regulation.

Protocol - EU Obligations

7.3 In March 2007, Ireland gave full effect to the E-PRTR Regulation through the making of the European Communities (European Pollutant Release and Transfer Register) Regulations 2007 (S.I. No. 123 of 2007). These Regulations provide for the designation of the EPA as competent authority for the purposes of the Regulations and the E-PRTR Regulation, and they also provide for enforcement.

7.4 While the EPA is not the competent authority for some of the activities listed in the E-PRTR Regulation, e.g. quarries (local authorities), aquaculture (Bord Iascaigh Mhara), the EPA has been designated as the competent authority for the purposes of collecting and assessing the necessary data for the E-PRTR.

7.5 Operators are required to submit the required data to the EPA who in turn submit the data to the E-PRTR in accordance with the timeframes set in E-PRTR Regulation and the Regulations.

7.6 It should be noted that the data to be submitted to the E-PRTR will be in respect of specific activities (i.e. above a certain capacity) and specific emissions (i.e. above a certain threshold) and not in respect of all activities and all emissions. Paragraphs 5.3 to 5.5 above refer.

7.7 Since March 2007, the EPA has engaged with operators coming within the scope of the E-PRTR on their obligations under the Regulations and the E-PRTR Regulation. It has also engaged with other regulatory authorities who are involved in data collection for the activities covered by the E-PRTR. In addition, the Agency has developed procedures and systems to collect the necessary data required under the E-PRTR. Further work is underway with a view to ensuring that the EPA is in a position to provide the 2007 data to the E-PRTR before the end of June 2009. The European Commission are expected to publish the information reported by Member States before the end of September 2009.

Other Protocol Obligations

7.8 The EU obligations and the E-PRTR Regulation do not address the establishment of a national PRTR arising under the Protocol. The development of a national PRTR and related issues is a key obligation which is required to be fulfilled by Ireland. This aspect is discussed below.

8. Development of an Irish PRTR

- 8.1 Article 4 of the UNECE Protocol on PRTRs outlines the core elements of a national PRTR. These elements are detailed below. The development of a national PRTR for Ireland is considered having regard to these core elements and other provisions of the Protocol as well as the provisions of the E-PRTR Regulation. The relevant Articles of the Protocol and E-PRTR Regulation are referenced below.

Article 4
CORE ELEMENTS OF A POLLUTANT RELEASE AND TRANSFER REGISTER SYSTEM

In accordance with this Protocol, each Party shall establish and maintain a publicly accessible national pollutant release and transfer register that:

- (a) Is facility-specific with respect to reporting on point sources;*
- (b) Accommodates reporting on diffuse sources;*
- (c) Is pollutant-specific or waste-specific, as appropriate;*
- (d) Is multimedia, distinguishing among releases to air, land and water;*
- (e) Includes information on transfers;*
- (f) Is based on mandatory reporting on a periodic basis;*
- (g) Includes standardized and timely data, a limited number of standardized reporting thresholds and limited provisions, if any, for confidentiality;*
- (h) Is coherent and designed to be user-friendly and publicly accessible, including in electronic form;*
- (i) Allows for public participation in its development and modification; and*
- (j) Is a structured, computerized database or several linked databases maintained by the competent authority.*

Design and Structure

(Article 5 of the Protocol and Article 4 of the E-PRTR Regulation)

- 8.2 The Irish PRTR will contain data on releases and transfers which may be searched and identified by members of the public according to the following criteria:
- facility;
 - geographical location, including the river basin;
 - activity;
 - operator;
 - pollutant or waste, as appropriate;

- each environmental medium (air, water, land) into which the pollutant is released;
- off-site transfers of waste and their destination and, where appropriate, the disposal or recovery operation for waste;
- off-site transfers of pollutants in waste water; and
- diffuse sources, where appropriate.

- 8.3 It is envisaged that the Irish PRTR will be a web-based system which will be searchable and will provide mapping and graphics tools and will be available at www.prtr.ie. It will be designed by adapting and customising the E-PRTR computer system to meet Irish needs. Operators will upload the data to EPA who will publish the data directly to the website after validation in accordance with the reporting requirements (detailed below). The valid data will be accessible by members of the public as soon as the EPA has assessed the quality of the data (detailed below).
- 8.4 At a minimum, the Irish PRTR will present, and allow users to interrogate, the same data that is required to be submitted to the E-PRTR. However, the system will be expanded such that details in respect of all PRTR pollutants will be recorded and not just those above certain thresholds, and these will be in respect of all EPA-licensed activities.
- 8.5 The EPA has been designated as competent authority for the purposes of the E-PRTR Regulation and as such it will be the competent authority for the UNECE Protocol on PRTRs. This will be formalised when the Protocol is being ratified. The EPA will be responsible for the development and maintenance of the Irish PRTR.
- 8.6 The EPA will review the role of other databases such as those listed earlier to see how they can be integrated, or work most effectively alongside the Irish PRTR.
- 8.7 The Irish PRTR will provide links to existing databases such as those maintained by the EPA and other public bodies in Ireland, to the E-PRTR, and to other international databases.
- 8.8 The Irish PRTR will accommodate data reported for previous reporting years, up to at least 10 previous reporting years.

Scope of the Register

(Article 6 of the Protocol and Article 3 of the E-PRTR Regulation)

- 8.9 The Irish PRTR will provide details of releases of pollutants, including those from diffuse sources and off-site transfers of pollutants, or waste in respect of those pollutants detailed in the E-PRTR Regulation and reproduced in Appendix 1 below. As noted earlier, there are more pollutants in the E-PRTR Regulation than in the Protocol.
- 8.10 The Irish PRTR will provide details in respect of activities detailed in the E-PRTR Regulation and reproduced in Appendix 2 below regardless of the number of employees. As noted earlier, the Protocol identifies the same activities but it specifies an employee threshold.

- 8.11 Consideration will be given to including other activities beyond those covered by the E-PRTR Regulation or the Protocol where these are relevant in an Irish context and in view of their risk to the environment because of their potential for major pollution. Such activities might include those listed in the First Schedule to the Environmental Protection Agency Act 1992 (as inserted by section 18 of the Protection of the Environment Act 2003) but not included in the IPPC Directive such as: mining activities and activities relating to the extraction of peat; additional activities included in the proposed Directive on Industrial Emissions; and other activities such as waste permit operations.

Reporting by Operators

(Articles 7, 9 and 10 of the Protocol and Articles 5, 6 and 9 of the E-PRTR Regulation)

- 8.12 Before 31 March in each year, the operators of the activities covered by the E-PRTR Regulation (listed in Appendix 2 below) are required to submit to the EPA data in respect of releases of pollutants and off-site transfers of pollutants and waste in respect of the preceding calendar year. The EPA may specify the nature and form in which such data should be submitted.
- 8.13 In compiling the report of such data, the operator is required to:
- provide information in respect of all deliberate, accidental, routine and non-routine activities;
 - indicate whether the data is based on measurement, calculation or estimation; and to include details of the analytical method and/or the method of calculation;
 - have regard to the frequency of collecting the data needed and to use best available information and internationally approved methodologies, where available;
 - describe the methodology used for data gathering; and
 - assure the quality of the information reported.
- 8.14 Operators are required to retain records of the data for a period of 5 years.

Reporting by the EPA

(Articles 8 and 10 of the Protocol and Articles 7 and 9 of the E-PRTR Regulation)

- 8.15 The EPA are required to assess the quality of the data provided by operators to ensure completeness, consistency and credibility, and to take account of any guidelines on assessing such data.
- 8.16 The EPA is required to submit the data for the E-PRTR by end-June 2009 for the first reporting year (2007); and by end March for each subsequent reporting year.
- 8.17 For the UNECE Protocol: the EPA is required to submit the data within 2 years after the end of the first reporting year; and within 15 months after each subsequent

reporting year. The first reporting year is the calendar year after the Protocol enters into force for Ireland (paragraph 3.3 above refers).

Public Access to Information, Confidentiality, Public Participation, and Access to Justice

(Articles 11, 12, 13 and 14 of the Protocol and Articles 10, 11, 12 and 13 of the E-PRTR Regulation)

- 8.18 The Irish PRTR constitutes 'environmental information' as defined in the European Communities (Access to Information on the Environment) Regulations 2007 (S.I. No. 133 of 2007). As such the provisions of these Regulations will apply to issues relating to access to the Irish PRTR.
- 8.19 As part of the ongoing development of the Irish PRTR, electronic access to the data in publicly accessible locations such as the EPA's offices, public libraries and other appropriate locations will be outlined.
- 8.20 The purposes of this paper is to provide an opportunity for stakeholders and the public in general to engage with, and contribute to the development of, an Irish PRTR. The outcome of this consultation process will be published.

Other General Provisions

(Article 3 of the Protocol and Articles 7 and 9 of the E-PRTR Regulation)

- 8.21 The Protocol and the E-PRTR Regulation require enforcement measures to be taken to ensure implementation of their provisions. Operators who fail to comply with their obligations under the E-PRTR Regulation are liable to criminal sanctions under the European Communities (European Pollutant Release and Transfer Register) Regulations 2007 (S.I. No. 123 of 2007). It is considered that the need to resort to criminal sanctions against operators is unlikely to arise often in the implementation of the E-PRTR Regulation or in the Protocol.
- 8.22 The Protocol requires that measures be taken to ensure that employees or members of the public who report a violation by a facility are not penalised, or otherwise persecuted or harassed. The EPA's complaint system, *Making an Environmental Complaint*, provides for making complaints relating to the environment and allows individuals to do so confidentially. It is considered that specific arrangements should be in place, as part of this system, to facilitate complaints relating to the Irish PRTR or the E-PRTR.

9. Timeframe for implementation

- 9.1 As noted earlier, complying with our EU obligations is a priority and our focus will be to concentrate on meeting the June 2009 deadline for the submission of the data in respect of Irish releases of pollutants and off-site transfers of pollutants and waste to the E-PRTR.

- 9.2 In parallel with this process, work will continue in developing the necessary procedures and systems to facilitate the development and implementation of the Irish PRTR. The development of an Irish PRTR will have regard to the experience gained and any difficulties arising in relation to the submission of the data to the E-PRTR.

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Department of the Environment,
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Appendix 1

List of Pollutants

The following is the list of pollutants covered by the E-PRTR Regulation and the Protocol. The pollutants that are highlighted in bold below are those which are not covered by the Protocol.

No.	CAS number	Pollutant
1	74-82-8	Methane (CH ₄)
2	630-08-0	Carbon monoxide (CO)
3	124-38-9	Carbon dioxide (CO ₂)
4		Hydro-fluorocarbons (HFCs)
5	10024-97-2	Nitrous oxide (N ₂ O)
6	7664-41-7	Ammonia (NH ₃)
7		Non-methane volatile organic compounds (NMVOC)
8		Nitrogen oxides (NO _x /NO ₂)
9		Perfluorocarbons (PFCs)
10	2551-62-4	Sulphur hexafluoride (SF ₆)
11		Sulphur oxides (SO _x /SO ₂)
12		Total nitrogen
13		Total phosphorus
14		Hydrochlorofluorocarbons (HCFCs)
15		Chlorofluorocarbons (CFCs)
16		Halons
17		<i>Arsenic</i> and compounds (as As)
18		<i>Cadmium</i> and compounds (as Cd)
19		<i>Chromium</i> and compounds (as Cr)
20		<i>Copper</i> and compounds (as Cu)
21		<i>Mercury</i> and compounds (as Hg)
22		<i>Nickel</i> and compounds (as Ni)
23		<i>Lead</i> and compounds (as Pb)
24		<i>Zinc</i> and compounds (as Zn)
25	15972-60-8	Alachlor
26	309-00-2	Aldrin
27	1912-24-9	Atrazine
28	57-74-9	Chlordane
29	143-50-0	Chlordecone

No.	CAS number	Pollutant
30	470-90-6	Chlorfenvinphos
31	85535-84-8	Chloro-alkanes, C ₁₀ -C ₁₃
32	2921-88-2	Chlorpyrifos
33	50-29-3	DDT
34	107-06-2	1,2-dichloroethane (EDC)
35	75-09-2	Dichloromethane (DCM)
36	60-57-1	Dieldrin
37	330-54-1	Diuron
38	115-29-7	Endosulfan
39	72-20-8	Endrin
40		Halogenated organic compounds (as AOX)
41	76-44-8	Heptachlor
42	118-74-1	Hexachlorobenzene (HCB)
43	87-68-3	Hexachlorobutadiene (HCBd)
44	608-73-1	1,2,3,4,5, 6 -hexachlorocyclohexane (HCH)
45	58-89-9	Lindane
46	2385-85-5	Mirex
47		PCDD +PCDF (dioxins +furans) (as Teq)
48	608-93-5	Pentachlorobenzene
49	87-86-5	Pentachlorophenol (PCP)
50	1336-36-3	Polychlorinated biphenyls (PCBs)
51	122-34-9	Simazine
52	127-18-4	Tetrachloroethylene (PER)
53	56-23-5	Tetrachloromethane (TCM)
54	12002-48-1	Trichlorobenzenes (TCBs) (<i>all isomers</i>)
55	71-55-6	1,1,1-trichloroethane
56	79-34-5	1,1,2,2-tetrachloroethane
57	79-01-6	Trichloroethylene
58	67-66-3	Trichloromethane
59	8001-35-2	Toxaphene
60	75-01-4	Vinyl chloride
61	120-12-7	Anthracene
62	71-43-2	Benzene
63		Brominated diphenylethers (PBDE)
64		Nonylphenol <i>and</i> Nonylphenol ethoxylates (<i>NP/NPEs</i>)
65	100-41-4	Ethyl benzene
66	75-21-8	Ethylene oxide

No.	CAS number	Pollutant
67	34123-59-6	Isoproturon
68	91-20-3	Naphthalene
69		Organotin compounds (as total Sn)
70	117-81-7	Di-(2-ethyl hexyl) phthalate (DEHP)
71	108-95-2	Phenols (as total C)
72		Polycyclic aromatic hydrocarbons (PAHs)
73	108-88-3	Toluene
74		Tributyltin and compounds
75		Triphenyltin and compounds
76		Total organic carbon (TOC) (as total C or COD/3)
77	1582-09-8	Trifluralin
78	1330-20-7	Xylenes
79		Chlorides (as total Cl)
80		Chlorine and inorganic compounds (as HCl)
81	1332-21-4	Asbestos
82		Cyanides (as total CN)
83		Fluorides (as total F)
84		Fluorine and inorganic compounds (as HF)
85	74-90-8	Hydrogen cyanide (HCN)
86		Particulate matter (PM10)
87	1806-26-4	Octylphenols and Octylphenol ethoxylates
88	206-44-0	Fluoranthene
89	465-73-6	Isodrin
90	36355-1-8	Hexabromobiphenyl
91	191-24-2	Benzo(g,h,i)perylene

Appendix 2

List of Activities

The following is the list of activities covered by the E-PRTR Regulation and the Protocol. The activities that are highlighted in bold below are those which were not covered by the EPER and as such are new to the E-PRTR Regulation and the Protocol.

E-PRTR (Regulation 166/2006 - Annex I) and UNECE Protocol on PRTRs (Annex I)		
No	Activity	Capacity threshold
1.	Energy sector	
(a)	Mineral oil and gas refineries	*
(b)	Installations for gasification and liquefaction	*
(c)	Thermal power stations and other combustion installations	With a heat input of 50 megawatts (MW)
(d)	Coke ovens	*
(e)	Coal rolling mills	With a capacity of 1 tonne per hour
(f)	Installations for the manufacture of coal products and solid smokeless fuel	*
2.	Production and processing of metals	
(a)	Metal ore (including sulphide ore) roasting or sintering installations	*
(b)	Installations for the production of pig iron or steel (primary or secondary melting) including continuous casting	With a capacity of 2.5 tonnes per hour
(c)	Installations for the processing of ferrous metals:	
	(i) Hot-rolling mills	With a capacity of 20 tonnes of crude steel per hour
	(ii) Smitheries with hammers	With an energy of 50 kilojoules per hammer, where the calorific power used exceeds 20 MW
	(iii) Application of protective fused metal coats	With an input of 2 tonnes of crude steel per hour
(d)	Ferrous metal foundries	With a production capacity of 20 tonnes per day
(e)	Installations:	
	(i) For the production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes	*
	(ii) For the smelting, including the alloying, of non-ferrous metals, including recovered products (refining, foundry casting, etc.)	With a melting capacity of 4 tons per day for lead and cadmium or 20 tonnes per day for all other metals
(f)	Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process	Where the volume of the treatment vats equals 30 m ³
3.	Mineral industry	
(a)	Underground mining and related operations	*
(b)	Opencast mining and quarrying	Where the surface of the area effectively under extractive operation equals 25 hectares

E-PRTR (Regulation 166/2006 - Annex I) and UNECE Protocol on PRTRs (Annex I)		
No	Activity	Capacity threshold
(c)	Installations for the production of:	
	(i) Cement clinker in rotary kilns	With a production capacity of 500 tonnes per day
	(ii) Lime in rotary kilns	With a production capacity of 50 tonnes per day
	(iii) Cement clinker or lime in other furnaces	With a production capacity of 50 tonnes per day
(d)	Installations for the production of asbestos and the manufacture of asbestos-based products	*
(e)	Installations for the manufacture of glass, including glass fibre	With a melting capacity of 20 tonnes per day
(f)	Installations for melting mineral substances, including the production of mineral fibres	With a melting capacity of 20 tonnes per day
(g)	Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain	With a production capacity of 75 tonnes per day, or with a kiln capacity of 4 m ³ and with a setting density per kiln of 300 kg/m ³
4.	Chemical industry	
(a)	Chemical installations for the production on an industrial scale of basic organic chemicals, such as:	*
	(i) Simple hydrocarbons (linear or cyclic, saturated or unsaturated, aliphatic or aromatic)	
	(ii) Oxygen-containing hydrocarbons such as alcohols, aldehydes, ketones, carboxylic acids, esters, acetates, ethers, peroxides, epoxy resins	
	(iii) Sulphurous hydrocarbons	
	(iv) Nitrogenous hydrocarbons such as amines, amides, nitrous compounds, nitro compounds or nitrate compounds, nitriles, cyanates, isocyanates	
	(v) Phosphorus-containing hydrocarbons	
	(vi) Halogenic hydrocarbons	
	(vii) Organometallic compounds	
	(viii) Basic plastic materials (polymers, synthetic fibres and cellulose-based fibres)	
	(ix) Synthetic rubbers	
	(x) Dyes and pigments	
	(xi) Surface-active agents and surfactants	
(b)	Chemical installations for the production on an industrial scale of basic inorganic chemicals, such as:	*
	(i) Gases, such as ammonia, chlorine or hydrogen chloride, fluorine or hydrogen fluoride, carbon oxides, sulphur compounds, nitrogen oxides, hydrogen, sulphur dioxide, carbonyl chloride	
	(ii) Acids, such as chromic acid, hydrofluoric acid, phosphoric acid, nitric acid, hydrochloric acid, sulphuric acid, oleum, sulphurous acids	

E-PRTR (Regulation 166/2006 - Annex I) and UNECE Protocol on PRTRs (Annex I)		
No	Activity	Capacity threshold
	(iii) Bases, such as ammonium hydroxide, potassium hydroxide, sodium hydroxide	
	(iv) Salts, such as ammonium chloride, potassium chlorate, potassium carbonate, sodium carbonate, perborate, silver nitrate	
	(v) Non-metals, metal oxides or other inorganic compounds such as calcium carbide, silicon, silicon carbide	
(c)	Chemical installations for the production on an industrial scale of phosphorous-, nitrogen- or potassium-based fertilizers (simple or compound fertilizers)	*
(d)	Chemical installations for the production on an industrial scale of basic plant health products and of biocides	*
(e)	Installations using a chemical or biological process for the production on an industrial scale of basic pharmaceutical products	*
(f)	Installations for the production on an industrial scale of explosives and pyrotechnic products	*
5.	Waste and waste water management	
(a)	Installations for the recovery or disposal of hazardous waste	Receiving 10 tonnes per day
(b)	Installations for the incineration of non-hazardous waste in the scope of Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste ²	With a capacity of 3 tonnes per hour
(c)	Installations for the disposal of non-hazardous waste	With a capacity of 50 tonnes per day
(d)	Landfills (excluding landfills of inert waste and landfills, which have been definitely closed before 16.7.2001 or for which the after-care phase required by the competent authorities according to Article 13 of Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste ³ has expired)	Receiving 10 tonnes per day or with a total capacity of 25,000 tonnes
(e)	Installations for the disposal or recycling of animal carcasses and animal waste	With a treatment capacity of 10 tonnes per day
(f)	Urban waste-water treatment plants	With a capacity of 100 000 population equivalents
(g)	Independently operated industrial waste-water treatment plants which serve one or more activities of this annex	With a capacity of 10 000 m ³ per day ⁴

² OJ L 332 , 28.12.2000, p. 91.

³ OJ L 182, 16.7.1999, p. 1. Directive as amended by Regulation (EC) No 1882/2003.

⁴ The capacity threshold shall be reviewed by 2010 at the latest in the light of the results of the first reporting cycle.

E-PRTR (Regulation 166/2006 - Annex I) and UNECE Protocol on PRTRs (Annex I)		
No	Activity	Capacity threshold
6.	Paper and wood production and processing	
(a)	Industrial plants for the production of pulp from timber or similar fibrous materials	*
(b)	Industrial plants for the production of paper and board and other primary wood products (such as chipboard, fibreboard and plywood)	With a production capacity of 20 tonnes per day
(c)	Industrial plants for the preservation of wood and wood products with chemicals	With a production capacity of 50 m ³ per day
7.	Intensive livestock production and aquaculture	
(a)	Installations for the intensive rearing of poultry or pigs	(i) With 40 000 places for poultry
		(ii) With 2 000 places for production pigs (over 30 kg)
		(iii) With 750 places for sows
(b)	Intensive aquaculture	With a production capacity of 1,000 tonnes of fish or shellfish per year
8.	Animal and vegetable products from the food and beverage sector	
(a)	Slaughterhouses	With a carcass production capacity of 50 tonnes per day
(b)	Treatment and processing intended for the production of food and beverage products from:	
	(i) Animal raw materials (other than milk)	With a finished product production capacity of 75 tonnes per day
	(ii) Vegetable raw materials	With a finished product production capacity of 300 tonnes per day (average value on a quarterly basis)
(c)	Treatment and processing of milk	With a capacity to receive 200 tonnes of milk per day (average value on an annual basis)
9.	Other activities	
(a)	Plants for the pre-treatment (operations such as washing, bleaching, mercerization) or dyeing of fibres or textiles	With a treatment capacity of 10 tonnes per day
(b)	Plants for the tanning of hides and skins	With a treatment capacity of 12 tonnes of finished product per day
(c)	Installations for the surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating	With a consumption capacity of 150 kg per hour or 200 tonnes per year
(d)	Installations for the production of carbon (hard-burnt coal) or electro-graphite by means of incineration or graphitization	*

E-PRTR (Regulation 166/2006 - Annex I) and UNECE Protocol on PRTRs (Annex I)		
No	Activity	Capacity threshold
(e)	Installations for the building of, and painting or removal of paint from ships	With a capacity for ships 100 m long

* An asterisk (*) indicates that no capacity threshold is applicable (all facilities are subject to reporting).