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**N° 12**

**Protocol on Pollutant Release and Transfer Registers to the  
Convention on Access to Information, Public Participation in  
Decision-Making and Access to Justice in Environmental Matters  
(PRTR)**

Done at Kiev on 21 May 2003

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Presented to Dáil Éireann by the Minister for Foreign Affairs and Trade

**PROTOCOL ON POLLUTANT RELEASE AND TRANSFER REGISTERS TO THE  
CONVENTION ON ACCESS TO INFORMATION, PUBLIC PARTICIPATION IN  
DECISION-MAKING AND ACCESS TO JUSTICE IN ENVIRONMENTAL  
MATTERS (PRTR)**

*The Parties to this Protocol,*

*Recalling* article 5, paragraph 9, and article 10, paragraph 2, of the 1998 Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (the Aarhus Convention),

*Recognizing* that pollutant release and transfer registers provide an important mechanism to increase corporate accountability, reduce pollution and promote sustainable development, as stated in the Lucca Declaration adopted at the first meeting of the Parties to the Aarhus Convention,

*Having regard to* principle 10 of the 1992 Rio Declaration on Environment and Development,

*Having regard also to* the principles and commitments agreed to at the 1992 United Nations Conference on Environment and Development, in particular the provisions in chapter 19 of Agenda 21,

*Taking note of* the Programme for the Further Implementation of Agenda 21, adopted by the General Assembly of the United Nations at its nineteenth special session, 1997, in which it called for, inter alia, enhanced national capacities and capabilities for information collection, processing and dissemination, to facilitate public access to information on global environmental issues through appropriate means,

*Having regard to* the Plan of Implementation of the 2002 World Summit on Sustainable Development, which encourages the development of coherent, integrated information on chemicals, such as through national pollutant release and transfer registers,

*Taking into account* the work of the Intergovernmental Forum on Chemical Safety, in particular the 2000 Bahia Declaration on Chemical Safety, the Priorities for Action Beyond 2000 and the Pollutant Release and Transfer Register/Emission Inventory Action Plan,

*Taking into account also* the activities undertaken within the framework of the Inter-Organization Programme for the Sound Management of Chemicals,

*Taking into account furthermore* the work of the Organisation for Economic Co-operation and Development, in particular its Council Recommendation on Implementing Pollutant Release and Transfer Registers, in which the Council calls upon member countries to establish and make publicly available national pollutant release and transfer registers,

*Wishing to* provide a mechanism contributing to the ability of every person of present and future generations to live in an environment adequate to his or her health and well-being, by ensuring the development of publicly accessible environmental information systems,

*Wishing also* to ensure that the development of such systems takes into account principles contributing to sustainable development such as the precautionary approach set forth in principle 15 of the 1992 Rio Declaration on Environment and Development,

*Recognizing* the link between adequate environmental information systems and the exercise of the rights contained in the Aarhus Convention,

*Noting* the need for cooperation with other international initiatives concerning pollutants and waste, including the 2001 Stockholm Convention on Persistent Organic Pollutants and the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,

*Recognizing* that the objectives of an integrated approach to minimizing pollution and the amount of waste resulting from the operation of industrial installations and other sources are to achieve a high level of protection for the environment as a whole, to move towards sustainable and environmentally sound development and to protect the health of present and future generations,

*Convinced* of the value of pollutant release and transfer registers as a cost-effective tool for encouraging improvements in environmental performance, for providing public access to information on pollutants released into and transferred in and through communities, and for use by 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,

*Believing* that pollutant release and transfer registers can bring tangible benefits to industry through the improved management of pollutants,

*Noting* the opportunities for using data from pollutant release and transfer registers, combined with health, environmental, demographic, economic or other types of relevant information, for the purpose of gaining a better understanding of potential problems, identifying ‘hot spots’, taking preventive and mitigating measures, and setting environmental management priorities,

*Recognizing* the importance of protecting the privacy of identified or identifiable natural persons in the processing of information reported to pollutant release and transfer registers in accordance with applicable international standards relating to data protection,

*Recognizing also* the importance of developing internationally compatible national pollutant release and transfer register systems to increase the comparability of data,

*Noting* that many member States of the United Nations Economic Commission for Europe, the European Community and the Parties to the North American Free Trade Agreement are acting to collect data on pollutant releases and transfers from various sources and to make these data publicly accessible, and recognizing especially in this area the long and valuable experience in certain countries,

*Taking into account* the different approaches in existing emission registers and the need to avoid duplication, and recognizing therefore that a certain degree of flexibility is needed,

*Urging* the progressive development of national pollutant release and transfer registers,

*Urging also* the establishment of links between national pollutant release and transfer registers and information systems on other releases of public concern,

*Have agreed* as follows:

#### *Article 1* *Objective*

The objective of this Protocol is to enhance public access to information through the establishment of coherent, integrated, nationwide pollutant release and transfer registers (PRTRs) in accordance with the provisions of this Protocol, which could facilitate public participation in environmental decision-making as well as contribute to the prevention and reduction of pollution of the environment.

#### *Article 2* *Definitions*

For the purposes of this Protocol,

1. “Party” means, unless the text indicates otherwise, a State or a regional economic integration organization referred to in article 24 which has consented to be bound by this Protocol and for which the Protocol is in force;
2. “Convention” means the Convention on Access to Information, Public Participation in Decision making and Access to Justice in Environmental Matters, done at Aarhus, Denmark, on 25 June 1998;
3. “The public” means one or more natural or legal persons, and, in accordance with national legislation or practice, their associations, organizations or groups;
4. “Facility” means one or more installations on the same site, or on adjoining sites, that are owned or operated by the same natural or legal person;
5. “Competent authority” means the national authority or authorities, or any other competent body or bodies, designated by a Party to manage a national pollutant release and transfer register system;
6. “Pollutant” means a substance or a group of substances that may be harmful to the environment or to human health on account of its properties and of its introduction into the environment;
7. “Release” means any introduction of pollutants into the environment as a result of any human activity, whether deliberate or accidental, routine or non-routine, including spilling, emitting, discharging, injecting, disposing or dumping, or through sewer systems without final waste-water treatment;

8. “Off-site transfer” means the movement beyond the boundaries of the facility of either pollutants or waste destined for disposal or recovery and of pollutants in waste water destined for waste-water treatment;
9. “Diffuse sources” means the many smaller or scattered sources from which pollutants may be released to land, air or water, whose combined impact on those media may be significant and for which it is impractical to collect reports from each individual source;
10. The terms “national” and “nationwide” shall, with respect to the obligations under the Protocol on Parties that are regional economic integration organizations, be construed as applying to the region in question unless otherwise indicated;
11. “Waste” means substances or objects which are:
  - (a) Disposed of or recovered;
  - (b) Intended to be disposed of or recovered; or
  - (c) Required by the provisions of national law to be disposed of or recovered;
12. “Hazardous waste” means waste that is defined as hazardous by the provisions of national law;
13. “Other waste” means waste that is not hazardous waste;
14. “Waste water” means used water containing substances or objects that is subject to regulation by national law.

### *Article 3* *General Provisions*

1. Each Party shall take the necessary legislative, regulatory and other measures, and appropriate enforcement measures, to implement the provisions of this Protocol.
2. The provisions of this Protocol shall not affect the right of a Party to maintain or introduce a more extensive or more publicly accessible pollutant release and transfer register than required by this Protocol.
3. Each Party shall take the necessary measures to require that employees of a facility and members of the public who report a violation by a facility of national laws implementing this Protocol to public authorities are not penalized, persecuted or harassed by that facility or public authorities for their actions in reporting the violation.
4. In the implementation of this Protocol, each Party shall be guided by the precautionary approach as set forth in principle 15 of the 1992 Rio Declaration on Environment and Development.
5. To reduce duplicative reporting, pollutant release and transfer register systems may be integrated to the degree practicable with existing information sources such as reporting mechanisms under licences or operating permits.

6. Parties shall strive to achieve convergence among national pollutant release and transfer registers.

#### Article 4

##### *Core Elements of a Pollutant Release and Transfer Register*

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;
- (c) Is multimedia, distinguishing among releases to air, land and water;
- (d) 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.

#### Article 5

##### *Design and Structure*

1. Each Party shall ensure that the data held on the register referred to in article 4 are presented in both aggregated and non-aggregated forms, so that releases and transfers can be searched and identified according to:

- (a) Facility and its geographical location;
- (b) Activity;
- (c) Owner or operator, and, as appropriate, company;
- (d) Pollutant or waste, as appropriate;
- (e) Each of the environmental media into which the pollutant is released; and

- (f) As specified in article 7, paragraph 5, the destination of the transfer and, where appropriate, the disposal or recovery operation for waste.
2. Each Party shall also ensure that the data can be searched and identified according to those diffuse sources which have been included in the register.
  3. Each Party shall design its register taking into account the possibility of its future expansion and ensuring that the reporting data from at least the ten previous reporting years are publicly accessible.
  4. The register shall be designed for maximum ease of public access through electronic means, such as the Internet. The design shall allow that, under normal operating conditions, the information on the register is continuously and immediately available through electronic means.
  5. Each Party should provide links in its register to its relevant existing, publicly accessible databases on subject matters related to environmental protection.
  6. Each Party shall provide links in its register to the pollutant release and transfer registers of other Parties to the Protocol and, where feasible, to those of other countries.

#### **Article 6** *Scope of the Register*

1. Each Party shall ensure that its register includes the information on:
  - (a) Releases of pollutants required to be reported under article 7, paragraph 2;
  - (b) Off-site transfers required to be reported under article 7, paragraph 2; and
  - (c) Releases of pollutants from diffuse sources required under article 7, paragraph 4.
2. Having assessed the experience gained from the development of national pollutant release and transfer registers and the implementation of this Protocol, and taking into account relevant international processes, the Meeting of the Parties shall review the reporting requirements under this Protocol and shall consider the following issues in its further development:
  - (a) Revision of the activities specified in annex I;
  - (b) Revision of the pollutants specified in annex II;
  - (c) Revision of the thresholds in annexes I and II; and
  - (d) Inclusion of other relevant aspects such as information on on-site transfers storage, the specification of reporting requirements for diffuse sources or the development of criteria for including pollutants under this Protocol.

*Article 7*  
*Reporting Requirements*

1. Each Party shall either:

(a) Require the owner or the operator of each individual facility within its jurisdiction that undertakes one or more of the activities specified in annex I above the applicable capacity threshold specified in annex I, column 1, and:

- (i) Releases any pollutant specified in annex II in quantities exceeding the applicable thresholds specified in annex II, column 1;
- (ii) Transfers off-site any pollutant specified in annex II in quantities exceeding the applicable threshold specified in annex II, column 2, where the Party has opted for pollutant-specific reporting of transfers pursuant to paragraph 5 (d);
- (iii) Transfers off-site hazardous waste exceeding 2 tons per year or other waste exceeding 2,000 tons per year, where the Party has opted for waste-specific reporting of transfers pursuant to paragraph 5 (d); or
- (iv) Transfers off-site any pollutant specified in annex II in waste water destined for waste-water treatment in quantities exceeding the applicable threshold specified in annex II, column 1b;

to undertake the obligation imposed on that owner or operator pursuant to paragraph 2; or

(b) Require the owner or the operator of each individual facility within its jurisdiction that undertakes one or more of the activities specified in annex I at or above the employee threshold specified in annex I, column 2, and manufactures, processes or uses any pollutant specified in annex II in quantities exceeding the applicable threshold specified in annex II, column 3, to undertake the obligation imposed on that owner or operator pursuant to paragraph 2.

2. Each Party shall require the owner or operator of a facility referred to in paragraph 1 to submit the information specified in paragraphs 5 and 6, and in accordance with the requirements therein, with respect to those pollutants and wastes for which thresholds were exceeded.

3. In order to achieve the objective of this Protocol, a Party may decide with respect to a particular pollutant to apply either a release threshold or a manufacture, process or use threshold, provided that this increases the relevant information on releases or transfers available in its register.

4. Each Party shall ensure that its competent authority collects, or shall designate one or more public authorities or competent bodies to collect, the information on releases of pollutants from diffuse sources specified in paragraphs 7 and 8, for inclusion in its register.



5. Each Party shall require the owners or operators of the facilities required to report under paragraph 2 to complete and submit to its competent authority, the following information on a facility-specific basis:

- (a) The name, street address, geographical location and the activity or activities of the reporting facility, and the name of the owner or operator, and, appropriate, company;
- (b) The name and numerical identifier of each pollutant required to be reported pursuant to paragraph 2;
- (c) The amount of each pollutant required to be reported pursuant to paragraph 2 released from the facility to the environment in the reporting year, both in aggregate and according to whether the release is to air, to water or to land, including by underground injection;
- (d) Either:
  - (i) The amount of each pollutant required to be reported pursuant to paragraph 2 that is transferred off-site in the reporting year, distinguishing between the amounts transferred for disposal and for recovery, and the name and address of the facility receiving the transfer; or
  - (ii) The amount of waste required to be reported pursuant to paragraph 2 transferred off-site in the reporting year, distinguishing between hazardous waste and other waste, for any operations of recovery or disposal, indicating respectively with 'R' or 'D' whether the waste is destined for recovery or disposal pursuant to annex III and, for transboundary movements of hazardous waste, the name and address of the recoverer or disposer of the waste and the actual recovery or disposal site receiving the transfer;
- (e) The amount of each pollutant in waste water required to be reported pursuant to paragraph 2 transferred off-site in the reporting year; and
- (f) The type of methodology used to derive the information referred to in subparagraphs (c) to (e), according to article 9, paragraph 2, indicating whether the information is based on measurement, calculation or estimation.

6. The information referred to in paragraph 5 (c) to (e) shall include information on releases and transfers resulting from routine activities and from extraordinary events.

7. Each Party shall present on its register, in an adequate spatial disaggregation, the information on releases of pollutants from diffuse sources for which that Party determines that data are being collected by the relevant authorities and can be practicably included. Where the Party determines that no such data exist, it shall take measures to initiate reporting on releases of relevant pollutants from one or more diffuse sources in accordance with its national priorities.

8. The information referred to in paragraph 7 shall include information on the type of methodology used to derive the information.

## **Article 8** *Reporting Cycle*

1. Each Party shall ensure that the information required to be incorporated in its register is publicly available, compiled and presented on the register by calendar year. The reporting year is the calendar year to which that information relates. For each Party, the first reporting year is the calendar year after the Protocol enters into force for that Party. The reporting required under article 7 shall be annual. However, the second reporting year may be the second calendar year following the first reporting year.

2. Each Party that is not a regional economic integration organization shall ensure that the information is incorporated into its register within fifteen months from the end of each reporting year. However, the information for the first reporting year shall be incorporated into its register within two years from the end of that reporting year.

3. Each Party that is a regional economic integration organization shall ensure that the information for a particular reporting year is incorporated into its register six months after the Parties that are not regional economic integration organizations are required to do so.

## **Article 9** *Data Collection and Record-Keeping*

1. Each Party shall require the owners or operators of the facilities subject to the reporting requirements of article 7 to collect the data needed to determine, in accordance with paragraph 2 below and with appropriate frequency, the facility's releases and off-site transfers subject to reporting under article 7 and to keep available for the competent authorities the records of the data from which the reported information was derived for a period of five years, starting from the end of the reporting year concerned. These records shall also describe the methodology used for data gathering.

2. Each Party shall require the owners or operators of the facilities subject to reporting under article 7 to use the best available information, which may include monitoring data, emission factors, mass balance equations, indirect monitoring or other calculations, engineering judgments and other methods. Where appropriate, this should be done in accordance with internationally approved methodologies.

## **Article 10** *Quality Assessment*

1. Each Party shall require the owners or operators of the facilities subject to the reporting requirements of article 7, paragraph 1, to assure the quality of the information that they report.

2. Each Party shall ensure that the data contained in its register are subject to quality assessment by the competent authority, in particular as to their completeness, consistency and credibility, taking into account any guidelines that may be developed by the Meeting of the Parties.

**Article 11**  
*Public Access to Information*

1. Each Party shall ensure public access to information contained in its pollutant release and transfer register, without an interest having to be stated, and according to the provisions of this Protocol, primarily by ensuring that its register provides for direct electronic access through public telecommunications networks.
2. Where the information contained in its register is not easily publicly accessible by direct electronic means, each Party shall ensure that its competent authority upon request provides that information by any other effective means, as soon as possible and at the latest within one month after the request has been submitted.
3. Subject to paragraph 4, each Party shall ensure that access to information contained in its register is free of charge.
4. Each Party may allow its competent authority to make a charge for reproducing and mailing the specific information referred to in paragraph 2, but such charge shall not exceed a reasonable amount.
5. Where the information contained in its register is not easily publicly accessible by direct electronic means, each Party shall facilitate electronic access to its register in publicly accessible locations, for example in public libraries, offices of local authorities or other appropriate places.

**Article 12**  
*Confidentiality*

1. Each Party may authorize the competent authority to keep information held on the register confidential where public disclosure of that information would adversely affect:
  - (a) International relations, national defence or public security;
  - (b) The course of justice, the ability of a person to receive a fair trial or the ability of a public authority to conduct an enquiry of a criminal or disciplinary nature;
  - (c) The confidentiality of commercial and industrial information, where such confidentiality is protected by law in order to protect a legitimate economic interest;
  - (d) Intellectual property rights; or
  - (e) The confidentiality of personal data and/or files relating to a natural person if that person has not consented to the disclosure of the information to the public, where such confidentiality is provided for in national law.

The aforementioned grounds for confidentiality shall be interpreted in a restrictive way, taking into account the public interest served by disclosure and whether the information relates to releases into the environment.

2. Within the framework of paragraph 1(c), any information on releases which is relevant for the protection of the environment shall be considered for disclosure according to national law.

3. Whenever information is kept confidential according to paragraph 1, the register shall indicate what type of information has been withheld, through, for example, providing generic chemical information if possible, and for what reason it has been withheld.

### Article 13

#### *Public Participation in the Development of National Pollutant Release and Transfer Registers*

1. Each Party shall ensure appropriate opportunities for public participation in the development of its national pollutant release and transfer register, within the framework of its national law.

2. For the purpose of paragraph 1, each Party shall provide the opportunity for free public access to the information on the proposed measures concerning the development of its national pollutant release and transfer register and for the submission of any comments, information, analyses or opinions that are relevant to the decision-making process, and the relevant authority shall take due account of such public input.

3. Each Party shall ensure that, when a decision to establish or significantly change its register has been taken, information on the decision and the considerations on which it is based are made publicly available in a timely manner.

### Article 14

#### *Access to Justice*

1. Each Party shall, within the framework of its national legislation, ensure that any person who considers that his or her request for information under article 11, paragraph 2, has been ignored, wrongfully refused, whether in part or in full, inadequately answered, or otherwise not dealt with in accordance with the provisions of that paragraph has access to a review procedure before a court of law or another independent and impartial body established by law.

2. The requirements in paragraph 1 are without prejudice to the respective rights and obligations of Parties under existing treaties applicable between them dealing with the subject matter of this article.

### Article 15

#### *Capacity-Building*

1. Each Party shall promote public awareness of its pollutant release and transfer register, and shall ensure that assistance and guidance are provided in accessing its register and in understanding and using the information contained in it.

2. Each Party should provide adequate capacity-building for and guidance to the responsible authorities and bodies to assist them in carrying out their duties under this Protocol.

**Article 16**  
*International Cooperation*

1. The Parties shall, as appropriate, cooperate and assist each other:
  - (a) In international actions in support of the objectives of this Protocol;
  - (b) On the basis of mutual agreement between the Parties concerned, in implementing national systems in pursuance of this Protocol;
  - (c) In sharing information under this Protocol on releases and transfers within border areas; and
  - (d) In sharing information under this Protocol concerning transfers among Parties.
2. The Parties shall encourage cooperation among each other and with relevant international organizations, as appropriate, to promote:
  - (a) Public awareness at the international level;
  - (b) The transfer of technology; and
  - (c) The provision of technical assistance to Parties that are developing countries and Parties with economies in transition in matters relating to this Protocol.

**Article 17**  
*Meeting of the Parties*

1. A Meeting of the Parties is hereby established. Its first session shall be convened no later than two years after the entry into force of this Protocol. Thereafter, ordinary sessions of the Meeting of the Parties shall be held sequentially with or parallel to ordinary meetings of the Parties to the Convention, unless otherwise decided by the Parties to this Protocol. The Meeting of the Parties shall hold an extraordinary session if it so decides in the course of an ordinary session or at the written request of any Party provided that, within six months of it being communicated by the Executive Secretary of the Economic Commission for Europe to all Parties, the said request is supported by at least one third of these Parties.
2. The Meeting of the Parties shall keep under continuous review the implementation and development of this Protocol on the basis of regular reporting by the Parties and, with this purpose in mind, shall:
  - (a) Review the development of pollutant release and transfer registers, and promote their progressive strengthening and convergence;
  - (b) Establish guidelines facilitating reporting by the Parties to it, bearing in mind the need to avoid duplication of effort in this regard;
  - (c) Establish a programme of work;

- (d) Consider and, where appropriate, adopt measures to strengthen international cooperation in accordance with article 16;
- (e) Establish such subsidiary bodies as it deems necessary;
- (f) Consider and adopt proposals for such amendments to this Protocol and its annexes as are deemed necessary for the purposes of this Protocol, in accordance with the provisions of article 20;
- (g) At its first session, consider and by consensus adopt rules of procedure for its sessions and those of its subsidiary bodies, taking into account any rules of procedure adopted by the Meeting of the Parties to the Convention;
- (h) Consider establishing financial arrangements by consensus and technical assistance mechanisms to facilitate the implementation of this Protocol;
- (i) Seek, where appropriate, the services of other relevant international bodies in the achievement of the objectives of this Protocol; and
- (j) Consider and take any additional action that may be required to further the objectives of this Protocol, such as the adoption of guidelines and recommendations which promote its implementation.

3. The Meeting of the Parties shall facilitate the exchange of information on the experience gained in reporting transfers using the pollutant-specific and waste-specific approaches, and shall review that experience in order to investigate the possibility of convergence between the two approaches, taking into account the public interest in information in accordance with article 1 and the overall effectiveness of national pollutant release and transfer registers.

4. The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any State or regional economic integration organization entitled under article 24 to sign this Protocol but which is not a Party to it, and any intergovernmental organization qualified in the fields to which the Protocol relates, shall be entitled to participate as observers in the sessions of the Meeting of the Parties. Their admission and participation shall be subject to the rules of procedure adopted by the Meeting of the Parties.

5. Any non-governmental organization qualified in the fields to which this Protocol relates which has informed the Executive Secretary of the Economic Commission for Europe of its wish to be represented at a session of the Meeting of the Parties shall be entitled to participate as an observer unless one third of the Parties present at the session raise objections. Their admission and participation shall be subject to the rules of procedure adopted by the Meeting of the Parties.

#### *Article 18* *Right to Vote*

1. Except as provided for in paragraph 2, each Party to this Protocol shall have one vote.

2. Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States which are Parties. Such organizations shall not exercise their right to vote if their member States exercise theirs, and vice versa.

## Article 19

### *Annexes*

Annexes to this Protocol shall form an integral part thereof and, unless expressly provided otherwise, a reference to this Protocol constitutes at the same time a reference to any annexes thereto.

## Article 20

### *Amendments*

1. Any Party may propose amendments to this Protocol.
2. Proposals for amendments to this Protocol shall be considered at a session of the Meeting of the Parties.
3. Any proposed amendment to this Protocol shall be submitted in writing to the secretariat, which shall communicate it at least six months before the session at which it is proposed for adoption to all Parties, to other States and regional economic integration organizations that have consented to be bound by the Protocol and for which it has not yet entered into force and to Signatories.
4. The Parties shall make every effort to reach agreement on any proposed amendment to this Protocol by consensus. If all efforts at consensus have been exhausted, and no agreement reached, the amendment shall as a last resort be adopted by a three-fourths majority vote of the Parties present and voting at the session.
5. For the purposes of this article, “Parties present and voting” means Parties present and casting an affirmative or negative vote.
6. Any amendment to this Protocol adopted in accordance with paragraph 4 shall be communicated by the secretariat to the Depositary, who shall circulate it to all Parties, to other States and regional economic integration organizations that have consented to be bound by the Protocol and for which it has not yet entered into force and to Signatories.
7. An amendment, other than one to an annex, shall enter into force for those Parties having ratified, accepted or approved it on the ninetieth day after the date of receipt by the Depositary of the instruments of ratification, acceptance or approval by at least three fourths of those which were Parties at the time of its adoption. Thereafter it shall enter into force for any other Party on the ninetieth day after that Party deposits its instrument of ratification, acceptance or approval of the amendment.
8. In the case of an amendment to an annex, a Party that does not accept such an amendment shall so notify the Depositary in writing within twelve months from the date of its circulation by the Depositary. The Depositary shall without delay inform all Parties of any

such notification received. A Party may at any time withdraw a notification of non-acceptance, whereupon the amendment to an annex shall enter into force for that Party.

9. On the expiry of twelve months from the date of its circulation by the Depositary as provided for in paragraph 6, an amendment to an annex shall enter into force for those Parties which have not submitted a notification to the Depositary in accordance with paragraph 8, provided that, at that time, not more than one third of those which were Parties at the time of the adoption of the amendment have submitted such a notification.

10. If an amendment to an annex is directly related to an amendment to this Protocol, it shall not enter into force until such time as the amendment to this Protocol enters into force.

#### *Article 21* *Secretariat*

The Executive Secretary of the Economic Commission for Europe shall carry out the following secretariat functions for this Protocol:

- (a) The preparation and servicing of the sessions of the Meeting of the Parties;
- (b) The transmission to the Parties of reports and other information received in accordance with the provisions of this Protocol;
- (c) The reporting to the Meeting of the Parties on the activities of the secretariat; and
- (d) Such other functions as may be determined by the Meeting of the Parties on the basis of available resources.

#### *Article 22* *Review of Compliance*

At its first session, the Meeting of the Parties shall by consensus establish cooperative procedures and institutional arrangements of a non-judicial, non-adversarial and consultative nature to assess and promote compliance with the provisions of this Protocol and to address cases of non-compliance. In establishing these procedures and arrangements, the Meeting of the Parties shall consider, inter alia, whether to allow for information to be received from members of the public on matters related to this Protocol.

#### *Article 23* *Settlement of Disputes*

1. If a dispute arises between two or more Parties about the interpretation or application of this Protocol, they shall seek a solution by negotiation or by any other peaceful means of dispute settlement acceptable to the parties to the dispute.

2. When signing, ratifying, accepting, approving or acceding to this Protocol, or at any time thereafter, a State may declare in writing to the Depositary that, for a dispute not resolved in accordance with paragraph 1, it accepts one or both of the following means of dispute settlement as compulsory in relation to any Party accepting the same obligation:



- (a) Submission of the dispute to the International Court of Justice;
- (b) Arbitration in accordance with the procedure set out in annex IV.

A regional economic integration organization may make a declaration with like effect in relation to arbitration in accordance with the procedures referred to in subparagraph (b).

3. If the parties to the dispute have accepted both means of dispute settlement referred to in paragraph 2, the dispute may be submitted only to the International Court of Justice, unless the parties to the dispute agree otherwise.

#### *Article 24* *Signature*

This Protocol shall be open for signature at Kiev (Ukraine) from 21 to 23 May 2003 on the occasion of the fifth Ministerial Conference “Environment for Europe”, and thereafter at United Nations Headquarters in New York until 31 December 2003, by all States which are members of the United Nations and by regional economic integration organizations constituted by sovereign States members of the United Nations to which their member States have transferred competence over matters governed by this Protocol, including the competence to enter into treaties in respect of these matters.

#### *Article 25* *Depositary*

The Secretary-General of the United Nations shall act as the Depositary of this Protocol.

#### *Article 26* *Ratification, Acceptance, Approval and Accession*

1. This Protocol shall be subject to ratification, acceptance or approval by signatory States and regional economic integration organizations referred to in article 24.

2. This Protocol shall be open for accession as from 1 January 2004 by the States and regional economic integration organizations referred to in article 24.

3. Any regional economic integration organization referred to in article 24 which becomes a Party without any of its member States being a Party shall be bound by all the obligations under this Protocol. If one or more member States of such an organization is a Party, the organization and its member States shall decide on their respective responsibilities for the performance of their obligations under this Protocol. In such cases, the organization and the member States shall not be entitled to exercise rights under this Protocol concurrently.

4. In their instruments of ratification, acceptance, approval or accession, the regional economic integration organizations referred to in article 24 shall declare the extent of their competence with respect to the matters governed by this Protocol. These organizations shall also inform the Depositary of any substantial modifications to the extent of their competence.

*Article 27*  
*Entry into Force*

1. This Protocol shall enter into force on the ninetieth day after the date of deposit of the sixteenth instrument of ratification, acceptance, approval or accession.
2. For the purposes of paragraph 1, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by the States members of such an organization.
3. For each State or regional economic integration organization which ratifies, accepts or approves this Protocol or accedes thereto after the deposit of the sixteenth instrument of ratification, acceptance, approval or accession, the Protocol shall enter into force on the ninetieth day after the date of deposit by such State or organization of its instrument of ratification, acceptance, approval or accession.

*Article 28*  
*Reservations*

No reservations may be made to this Protocol.

*Article 29*  
*Withdrawal*

At any time after three years from the date on which this Protocol has come into force with respect to a Party, that Party may withdraw from the Protocol by giving written notification to the Depositary. Any such withdrawal shall take effect on the ninetieth day after the date of its receipt by the Depositary.

*Article 30*  
*Authentic Texts*

The original of this Protocol, of which the English, French and Russian texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

**IN WITNESS WHEREOF** the undersigned, being duly authorized thereto, have signed this Protocol.

**DONE** at Kiev, this twenty-first day of May, two thousand and three.

Annex I  
Activities

No.	Activity	Capacity threshold (column 1)	Employee threshold (column 2)
<b>1.</b>	<b>Energy sector</b>		
(a)	Mineral oil and gas refineries	*	10 employees
(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 ton per hour	
(f)	Installations for the manufacture of coal products and solid smokeless fuel	*	
<b>2.</b>	<b>Production and processing of metals</b>		
(a)	Metal ore (including sulphide ore) roasting or sintering installations	*	10 employees
(b)	Installations for the production of pig iron or steel (primary or secondary melting) including continuous casting	With a capacity of 2.5 tons per hour	
(c)	Installations for the processing of ferrous metals:  (i) Hot-rolling mills  (ii) Smitheries with hammers  (iii) Application of protective fused metal coats	With a capacity of 20 tons of crude steel per hour With an energy of 50 kilojoules per hammer, where the calorific power used exceeds 20 MW With an input of 2 tons of crude steel per hour	
(d)	Ferrous metal foundries	With a production capacity of 20 tons 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	*	

No.	Activity	Capacity threshold (column 1)	Employee threshold (column 2)
	(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 tons per day for all other metals	10 employees
(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 <sup>3</sup>	
<b>3. Mineral industry</b>			
(a)	Underground mining and related operations	*	10 employees
(b)	Opencast mining	Where the surface of the area being mined equals 25 hectares	
(c)	Installations for the production of:  (i) Cement clinker in rotary kilns  (ii) Lime in rotary kilns  (iii) Cement clinker or lime in other furnaces	With a production capacity of 500 tons per day With a production capacity exceeding 50 tons per day With a production capacity of 50 tons 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 tons per day	
(f)	Installations for melting mineral substances, including the production of mineral fibres	With a melting capacity of 20 tons 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 tons per day, or with a kiln capacity of 4 m <sup>3</sup> and with a setting density per kiln of 300 kg/m <sup>3</sup>	

No.	Activity	Capacity threshold (column 1)	Employee threshold (column 2)
<b>4.</b>	<b>Chemical industry</b>		
(a)	<p>Chemical installations for the production on an industrial scale of basic organic chemicals, such as:</p> <ul style="list-style-type: none"> <li>(i) Simple hydrocarbons (linear or cyclic, saturated or unsaturated, aliphatic or aromatic)</li> <li>(ii) Oxygen-containing hydrocarbons such as alcohols, aldehydes, ketones, carboxylic acids, esters, acetates, ethers, peroxides, epoxy resins</li> <li>(iii) Sulphurous hydrocarbons</li> <li>(iv) Nitrogenous hydrocarbons such as amines, amides, nitrous compounds, nitro compounds or nitrate compounds, nitriles, cyanates, isocyanates</li> <li>(v) Phosphorus-containing hydrocarbons</li> <li>(vi) Halogenic hydrocarbons</li> <li>(vii) Organometallic compounds</li> <li>(viii) Basic plastic materials (polymers, synthetic fibres and cellulose-based fibres)</li> <li>(ix) Synthetic rubbers</li> <li>(x) Dyes and pigments</li> <li>(xi) Surface-active agents and surfactants</li> </ul>	*	
(b)	<p>Chemical installations for the production on an industrial scale of basic inorganic chemicals, such as:</p> <ul style="list-style-type: none"> <li>(i) Gases, such as ammonia, chlorine or hydrogen chloride, fluorine or hydrogen fluoride, carbon oxides, sulphur compounds, nitrogen oxides, hydrogen, sulphur dioxide, carbonyl chloride</li> <li>(ii) Acids, such as chromic acid, hydrofluoric acid, phosphoric acid, nitric acid, hydrochloric acid, sulphuric acid, oleum, sulphurous acids</li> <li>(iii) Bases, such as ammonium hydroxide, potassium hydroxide, sodium hydroxide</li> <li>(iv) Salts, such as ammonium chloride, potassium chlorate, potassium carbonate, sodium carbonate, perborate, silver nitrate</li> <li>(v) Non-metals, metal oxides or other inorganic compounds such as calcium carbide, silicon, silicon carbide</li> </ul>	*	10 employees
(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	*	

No.	Activity	Capacity threshold (column 1)	Employee threshold (column 2)
(f)	Installations for the production on an industrial scale of explosives and pyrotechnic products	*	10 employees
<b>5.</b>	<b>Waste and waste-water management</b>		
(a)	Installations for the incineration, pyrolysis, recovery, chemical treatment or landfilling of hazardous waste	Receiving 10 tons per day	10 employees
(b)	Installations for the incineration of municipal waste	With a capacity of 3 tons per hour	
(c)	Installations for the disposal of non-hazardous waste	With a capacity of 50 tons per day	
(d)	Landfills (excluding landfills of inert waste)	Receiving 10 tons per day or with a total capacity of 25,000 tons	
(e)	Installations for the disposal or recycling of animal carcasses and animal waste	With a treatment capacity of 10 tons per day	
(f)	Municipal 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 <sup>3</sup> per day	
<b>6.</b>	<b>Paper and wood production and processing</b>		
(a)	Industrial plants for the production of pulp from timber or similar fibrous materials	*	10 employees
(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 tons per day	
(c)	Industrial plants for the preservation of wood and wood products with chemicals	With a production capacity of 50 m <sup>3</sup> per day	
<b>7.</b>	<b>Intensive livestock production and aquaculture</b>		
(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	10 employees
(b)	Intensive aquaculture	1,000 tons of fish and shellfish per year	
<b>8.</b>	<b>Animal and vegetable products from the food and beverage sector</b>		
(a)	Slaughterhouses	With a carcass production capacity of 50 tons per day	10 employees

No.	Activity	Capacity threshold (column 1)	Employee threshold (column 2)
(b)	Treatment and processing intended for the production of food and beverage products from: (i) Animal raw materials (other than milk)  (ii) Vegetable raw materials	With a finished product production capacity of 75 tons per day With a finished product production capacity of 300 tons per day (average value on a quarterly basis)	
(c)	Treatment and processing of milk	With a capacity to receive 200 tons of milk per day (average value on an annual basis)	
<b>9.</b>	<b>Other activities</b>		
(a)	Plants for the pretreatment (operations such as washing, bleaching, mercerization) or dyeing of fibres or textiles	With a treatment capacity of 10 tons per day	10 employees
(b)	Plants for the tanning of hides and skins	With a treatment capacity of 12 tons 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 tons per year	
(d)	Installations for the production of carbon (hard-burnt coal) or electrographite by means of incineration or graphitization	*	
(e)	Installations for the building of, and painting or removal of paint from ships	With a capacity for ships 100 m long	

Explanatory notes:

Column 1 contains the capacity thresholds referred to article 7, paragraph 1 (a).

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

Column 2 contains the employee threshold referred to in article 7, paragraph 1 (b).

“10 employees” means the equivalent of 10 full-time employees.

Annex II  
Pollutants

No.	CAS number	Pollutant	Threshold for releases (column 1)			Threshold for off-site transfers of pollutants (column 2) kg/year	Manufacture, process or use threshold (column 3) kg/year
			to air (column 1a) kg/year	to water (column 1b) kg/year	to land (column 1c) kg/year		
1	74-82-8	Methane (CH <sub>4</sub> )	100 000	-	-	-	*
2	630-08-0	Carbon monoxide (CO)	500 000	-	-	-	*
3	124-38-9	Carbon dioxide (CO <sub>2</sub> )	100 million	-	-	-	*
4		Hydro-fluorocarbons (HFCs)	100	-	-	-	*
5	10024-97-2	Nitrous oxide (N <sub>2</sub> O)	10 000	-	-	-	*
6	7664-41-7	Ammonia (NH <sub>3</sub> )	10 000	-	-	-	10 000
7		Non-methane volatile organic compounds (NMVOC)	100 000	-	-	-	*
8		Nitrogen oxides (NO <sub>x</sub> /NO <sub>2</sub> )	100 000	-	-	-	*
9		Perfluorocarbons (PFCs)	100	-	-	-	*
10	2551-62-4	Sulphur hexafluoride (SF <sub>6</sub> )	50	-	-	-	*
11		Sulphur oxides (SO <sub>x</sub> /SO <sub>2</sub> )	150 000	-	-	-	*
12		Total nitrogen	-	50 000	50 000	10 000	10 000
13		Total phosphorus	-	5 000	5 000	10 000	10 000
14		Hydrochlorofluorocarbons (HCFCs)	1	-	-	100	10 000
15		Chlorofluorocarbons (CFCs)	1	-	-	100	10 000
16		Halons	1	-	-	100	10 000
17	7440-38-2	Arsenic and compounds (as As)	20	5	5	50	50
18	7440-43-9	Cadmium and compounds (as Cd)	10	5	5	5	5
19	7440-47-3	Chromium and compounds (as Cr)	100	50	50	200	10 000
20	7440-50-8	Copper and compounds (as Cu)	100	50	50	500	10 000
21	7439-97-6	Mercury and compounds (as Hg)	10	1	1	5	5
22	7440-02-0	Nickel and compounds (as Ni)	50	20	20	500	10 000
23	7439-92-1	Lead and compounds (as Pb)	200	20	20	50	50
24	7440-66-6	Zinc and compounds (as Zn)	200	100	100	1 000	10 000
25	15972-60-8	Alachlor	-	1	1	5	10 000
26	309-00-2	Aldrin	1	1	1	1	1
27	1912-24-9	Atrazine	-	1	1	5	10 000
28	57-74-9	Chlordane	1	1	1	1	1



No.	CAS number	Pollutant	Threshold for releases (column 1)			Threshold for off-site transfers of pollutants (column 2) kg/year	Manufacture, process or use threshold (column 3) kg/year
			to air (column 1a) kg/year	to water (column 1b) kg/year	to land (column 1c) kg/year		
29	143-50-0	Chlordecone	1	1	1	1	1
30	470-90-6	Chlorfenvinphos	-	1	1	5	10 000
31	85535-84-8	Chloro-alkanes, C <sub>10</sub> -C <sub>13</sub>	-	1	1	10	10 000
32	2921-88-2	Chlorpyrifos	-	1	1	5	10 000
33	50-29-3	DDT	1	1	1	1	1
34	107-06-2	1,2-dichloroethane (EDC)	1 000	10	10	100	10 000
35	75-09-2	Dichloromethane (DCM)	1 000	10	10	100	10 000
36	60-57-1	Dieldrin	1	1	1	1	1
37	330-54-1	Diuron	-	1	1	5	10 000
38	115-29-7	Endosulphan	-	1	1	5	10 000
39	72-20-8	Endrin	1	1	1	1	1
40		Halogenated organic compounds (as AOX)	-	1 000	1 000	1 000	10 000
41	76-44-8	Heptachlor	1	1	1	1	1
42	118-74-1	Hexachlorobenzene (HCB)	10	1	1	1	5
43	87-68-3	Hexachlorobutadiene (HCBd)	-	1	1	5	10 000
44	608-73-1	1,2,3,4,5,6-hexachlorocyclohexane (HCH)	10	1	1	1	10
45	58-89-9	Lindane	1	1	1	1	1
46	2385-85-5	Mirex	1	1	1	1	1
47		PCDD +PCDF (dioxins +furans) (as Teq)	0.001	0.001	0.001	0.001	0.001
48	608-93-5	Pentachlorobenzene	1	1	1	5	50
49	87-86-5	Pentachlorophenol (PCP)	10	1	1	5	10 000
50	1336-36-3	Polychlorinated biphenyls (PCBs)	0.1	0.1	0.1	1	50
51	122-34-9	Simazine	-	1	1	5	10 000
52	127-18-4	Tetrachloroethylene (PER)	2 000	-	-	1 000	10 000
53	56-23-5	Tetrachloromethane (TCM)	100	-	-	1 000	10 000
54	12002-48-1	Trichlorobenzenes (TCBs)	10	-	-	1 000	10 000
55	71-55-6	1,1,1-trichloroethane	100	-	-	1 000	10 000
56	79-34-5	1,1,2,2-tetrachloroethane	50	-	-	1 000	10 000
57	79-01-6	Trichloroethylene	2 000	-	-	1 000	10 000
58	67-66-3	Trichloromethane	500	-	-	1 000	10 000
59	8001-35-2	Toxaphene	1	1	1	1	1
60	75-01-4	Vinyl chloride	1 000	10	10	100	10 000
61	120-12-7	Anthracene	50	1	1	50	50
62	71-43-2	Benzene	1 000	200 (as BTEX) a/	200 (as BTEX) a/	2 000 (as BTEX) a/	10 000
63		Brominated diphenylethers (PBDE)	-	1	1	5	10 000

No.	CAS number	Pollutant	Threshold for releases (column 1)			Threshold for off-site transfers of pollutants (column 2) kg/year	Manufacture, process or use threshold (column 3) kg/year
			to air (column 1a) kg/year	to water (column 1b) kg/year	to land (column 1c) kg/year		
64		Nonylphenol ethoxylates (NP/NPEs) and related substances	-	1	1	5	10 000
65	100-41-4	Ethyl benzene	-	200 (as BTEX) <sup>a/</sup>	200 (as BTEX) <sup>a/</sup>	2 000 (as BTEX) <sup>a/</sup>	10 000
66	75-21-8	Ethylene oxide	1 000	10	10	100	10 000
67	34123-59-6	Isoproturon	-	1	1	5	10 000
68	91-20-3	Naphthalene	100	10	10	100	10 000
69		Organotin compounds (as total Sn)	-	50	50	50	10 000
70	117-81-7	Di-(2-ethyl hexyl) phthalate (DEHP)	10	1	1	100	10 000
71	108-95-2	Phenols (as total C)	-	20	20	200	10 000
72		Polycyclic aromatic hydrocarbons (PAHs) <sup>b/</sup>	50	5	5	50	50
73	108-88-3	Toluene	-	200 (as BTEX) <sup>a/</sup>	200 (as BTEX) <sup>a/</sup>	2 000 (as BTEX) <sup>a/</sup>	10 000
74		Tributyltin and compounds	-	1	1	5	10 000
75		Triphenyltin and compounds	-	1	1	5	10 000
76		Total organic carbon (TOC) (as total C or COD/3)	-	50 000	-	-	**
77	1582-09-8	Trifluralin	-	1	1	5	10 000
78	1330-20-7	Xylenes	-	200 (as BTEX) <sup>a/</sup>	200 (as BTEX) <sup>a/</sup>	2 000 (as BTEX) <sup>a/</sup>	10 000
79		Chlorides (as total Cl)	-	2 million	2 million	2 million	10 000 <sup>c/</sup>
80		Chlorine and inorganic compounds (as HCl)	10 000	-	-	-	10 000
81	1332-21-4	Asbestos	1	1	1	10	10 000
82		Cyanides (as total CN)	-	50	50	500	10 000
83		Fluorides (as total F)	-	2 000	2 000	10 000	10 000 <sup>c/</sup>
84		Fluorine and inorganic compounds (as HF)	5 000	-	-	-	10 000
85	74-90-8	Hydrogen cyanide (HCN)	200	-	-	-	10 000
86		Particulate matter (PM <sub>10</sub> )	50 000	-	-	-	*

Explanatory notes:

The CAS number of the pollutant means the precise identifier in Chemical Abstracts Service.

Column 1 contains the thresholds referred to in article 7, paragraph 1 (a)(i) and (iv). If the threshold in a given sub-column (air, water or land) is exceeded, reporting of releases or, for pollutants in waste water destined for waste-water treatment, transfers to the environmental medium referred to in that sub-column is required with respect to the facility in question, for those Parties which have opted for a system of reporting pursuant to article 7, paragraph 1 (a).

Column 2 contains the thresholds referred to in article 7, paragraph 1 (a)(ii). If the threshold in this column is exceeded for a given pollutant, reporting of the off-site transfer of that pollutant is required with respect to the facility in question, for those Parties which have opted for a system of reporting pursuant to article 7, paragraph 1 (a)(ii).

Column 3 contains the thresholds referred to in article 7, paragraph 1(b). If the threshold in this column is exceeded for a given pollutant, reporting of the releases and off-site transfers of that pollutant is required with respect to the facility in question, for those Parties which have opted for a system of reporting pursuant to article 7, paragraph 1 (b).

A hyphen (-) indicates that the parameter in question does not trigger a reporting requirement.

An asterisk (\*) indicates that, for this pollutant, the release threshold in column (1)(a) is to be used rather than a manufacture, process or use threshold.

A double asterisk (\*\*) indicates that, for this pollutant, the release threshold in column (1)(b) is to be used rather than a manufacture, process or use threshold.

Footnotes:

a/ Single pollutants are to be reported if the threshold for BTEX (the sum parameter of benzene, toluene, ethyl benzene, xylene) is exceeded.

b/ Polycyclic aromatic hydrocarbons (PAHs) are to be measured as benzo(a)pyrene (50-32-8), benzo(b)fluoranthene (205-99-2), benzo(k)fluoranthene (207-08-9), indeno(1,2,3-cd)pyrene (193-39-5) (derived from the Protocol on Persistent Organic Pollutants to the Convention on Long-range Transboundary Air Pollution).

c/ As inorganic compounds.

## Annex III

### PART A DISPOSAL OPERATIONS ('D')

- Deposit into or onto land (e.g. landfill)
- Land treatment (e.g. biodegradation of liquid or sludgy discards in soils)
- Deep injection (e.g. injection of pumpable discards into wells, salt domes or naturally occurring repositories)
- Surface impoundment (e.g. placement of liquid or sludge discards into pits, ponds or lagoons)
- Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment)
- Release into a water body except seas/oceans
- Release into seas/oceans including sea-bed insertion
- Biological treatment not specified elsewhere in this annex which results in final compounds or mixtures which are discarded by means of any of the operations specified in this part
- Physico-chemical treatment not specified elsewhere in this annex which results in final compounds or mixtures which are discarded by means of any of the operations specified in this part (e.g. evaporation, drying, calcination, neutralization, precipitation)
- Incineration on land
- Incineration at sea
- Permanent storage (e.g. emplacement of containers in a mine)
- Blending or mixing prior to submission to any of the operations specified in this part
- Repackaging prior to submission to any of the operations specified in this part
- Storage pending any of the operations specified in this part

### PART B RECOVERY OPERATIONS ('R')

- Use as a fuel (other than in direct incineration) or other means to generate energy
- Solvent reclamation/regeneration

- Recycling/reclamation of organic substances which are not used as solvents
- Recycling/reclamation of metals and metal compounds
- Recycling/reclamation of other inorganic materials
- Regeneration of acids or bases
- Recovery of components used for pollution abatement
- Recovery of components from catalysts
- Used oil re-refining or other reuses of previously used oil
- Land treatment resulting in benefit to agriculture or ecological improvement
- Uses of residual materials obtained from any of the recovery operations specified above in this part
- Exchange of wastes for submission to any of the recovery operations specified above in this part
- Accumulation of material intended for any operation specified in this part

## Annex IV ARBITRATION

1. In the event of a dispute being submitted for arbitration pursuant to article 23, paragraph 2, of this Protocol, a party or parties shall notify the other party or parties to the dispute by diplomatic means as well as the secretariat of the subject matter of arbitration and indicate, in particular, the articles of this Protocol whose interpretation or application is at issue. The secretariat shall forward the information received to all Parties to this Protocol.
2. The arbitral tribunal shall consist of three members. Both the claimant party or parties and the other party or parties to the dispute shall appoint an arbitrator, and the two arbitrators so appointed shall designate by common agreement the third arbitrator, who shall be the president of the arbitral tribunal. The latter shall not be a national of one of the parties to the dispute, nor have his or her usual place of residence in the territory of one of these parties, nor be employed by any of them, nor have dealt with the case in any other capacity.
3. If the president of the arbitral tribunal has not been designated within two months of the appointment of the second arbitrator, the Executive Secretary of the Economic Commission for Europe shall, at the request of either party to the dispute, designate the president within a further two -month period.
4. If one of the parties to the dispute does not appoint an arbitrator within two months of the notification referred to in paragraph 1, the other party may so inform the Executive Secretary of the Economic Commission for Europe, who shall designate the president of the arbitral tribunal within a further two-month period. Upon designation, the president of the arbitral tribunal shall request the party which has not appointed an arbitrator to do so within two months. If it fails to do so within that period, the president shall so inform the Executive Secretary of the Economic Commission for Europe, who shall make this appointment within a further two -month period.
5. The arbitral tribunal shall render its decision in accordance with international law and the provisions of this Protocol.
6. Any arbitral tribunal constituted under the provisions set out in this annex shall draw up its own rules of procedure.
7. The decisions of the arbitral tribunal, both on procedure and on substance, shall be taken by majority vote of its members.
8. The tribunal may take all appropriate measures to establish the facts.
9. The parties to the dispute shall facilitate the work of the arbitral tribunal and, in particular, using all means at their disposal, shall:
  - (a) Provide it with all relevant documents, facilities and information;
  - (b) Enable it, where necessary, to call witnesses or experts and receive their evidence.

10. The parties and the arbitrators shall protect the confidentiality of any information that they receive in confidence during the proceedings of the arbitral tribunal.

11. The arbitral tribunal may, at the request of one of the parties, recommend interim measures of protection.

12. If one of the parties to the dispute does not appear before the arbitral tribunal or fails to defend its case, the other party may request the tribunal to continue the proceedings and to render its final decision.

Absence of a party or failure of a party to defend its case shall not constitute a bar to the proceedings.

Before rendering its final decision, the arbitral tribunal must satisfy itself that the claim is well founded in fact and law.

13. The arbitral tribunal may hear and determine counterclaims arising directly out of the subject matter of the dispute.

14. Unless the arbitral tribunal determines otherwise because of the particular circumstances of the case, the expenses of the tribunal, including the remuneration of its members, shall be borne by the parties to the dispute in equal shares. The tribunal shall keep a record of all its expenses, and shall furnish a final statement thereof to the parties.

15. Any Party to this Protocol which has an interest of a legal nature in the subject matter of the dispute, and which may be affected by a decision in the case, may intervene in the proceedings with the consent of the tribunal.

16. The arbitral tribunal shall render its award within five months of the date on which it is established, unless it finds it necessary to extend the time limit for a period which should not exceed five months.

17. The award of the arbitral tribunal shall be accompanied by a statement of reasons. It shall be final and binding upon all parties to the dispute. The award will be transmitted by the arbitral tribunal to the parties to the dispute and to the secretariat. The secretariat will forward the information received to all Parties to this Protocol.

18. Any dispute which may arise between the parties concerning the interpretation or execution of the award may be submitted by either party to the arbitral tribunal which made the award or, if the latter cannot be seized thereof, to another tribunal constituted for this purpose in the same manner as the first.