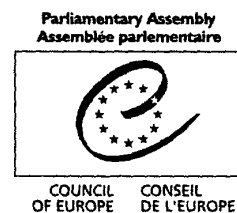


# Parliamentary Assembly Assemblée parlementaire



For debate in the Standing Committee — see Rule 15 of the Rules of Procedure

**Doc. 10457**  
16 February 2005

## Industrial hazards

Report  
Committee on the Environment, Agriculture and Local and Regional Affairs  
Rapporteur: Mrs Svetlana Smirnova, Russia, European Democrat Groupe

### *Summary*

Some industrial plants, by the nature of their activities and the substances they use, constitute hazards which are all the greater when they are located close to residential areas for these and their residents are particularly exposed in the event of an accident. The Toulouse explosion of 2001 tragically demonstrated the need to leave sufficient distance between any site used for potentially dangerous activities and residential areas.

International (International Labour Organisation, United Nations Economic Commission for Europe) and European ("Seveso" Directives) legislation exist in the field but it is not yet ratified or implemented by all the Council of Europe member states. Important differences still exist in Europe between national legislation on industrial plants.

The report encourages the member states of the Council of Europe to update national legislation on the prevention and limitation of industrial hazards, especially in residential areas, to develop transfrontier co-operation and to harmonise relevant spatial planning policies.

## I. Draft resolution

1. Some industrial plants, by the nature of their activities and the substances they use, constitute hazards which are all the greater when they are located close to residential areas for these and their residents are particularly exposed in the event of an accident.

2. The Parliamentary Assembly believes that appropriate legislation on the siting of industrial plants is a vital precondition for an effective major accident prevention and limitation policy. In 1976, the chemical release after the accident at Seveso (Italy) prompted the European Communities to adopt their first Directive in this field. Gradually, the scope of this was extended. It should be remembered here that subsequent industrial accidents occurred at Baia Mare (Romania) (2000), Enschede (Netherlands) (2000) and Toulouse (France) (2001). Even more recently, the July 2004 disaster at Ghislenghien (Belgium) gave another indication of the need for legislation which is both appropriate and strictly applied.

3. At the present time, there are two international legal instruments relating to major non-nuclear industrial hazards: International Labour Organisation (ILO) Convention No 174 concerning the Prevention of Major Industrial Accidents (Geneva, 1993) and the United Nations Economic Commission for Europe (UNECE) Convention on the Transboundary Effects of Industrial Accidents (Helsinki, 1992), with its Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters (Kiev, 2003).

4. At European Union level, Directive 96/82/EC of the Council of 9 December 1996 (the Seveso II Directive) relates to the control of the dangers connected with major accidents involving dangerous substances, particularly where potentially dangerous industries are sited close to residential areas. Among its aims is a better exchange of information among member states and it devotes much attention to the potential transfrontier effects of serious accidents and to compliance with regulations, especially through systematic inspections.

5. The Assembly is aware of the significant differences in Europe between national legislation on industrial accidents and it urges Council of Europe member states which are not members of the European Union to draw on the provisions of this Directive when preparing or updating their own legislation.

6. Furthermore, spatial planning policies are particularly important for the prevention of disasters caused by industrial accidents. The Toulouse explosion of 2001 tragically demonstrated the need to leave sufficient distance between any site used for potentially dangerous activities and residential areas.

7. The Assembly also notes the importance of the activities of the "EUR-OPA Major Hazards" Open Partial Agreement of the Council of Europe which offers a unique platform for co-operation in the field of technological hazards, particularly in respect of knowledge, prevention, crisis management, post-crisis analysis and rehabilitation.

8. The Assembly therefore urges member states:

i. to sign and/or ratify, if they have not already done so, ILO Convention No 174 concerning the Prevention of Major Industrial Accidents;

ii. to sign and/or ratify, if they have not already done so, the UNECE Convention on the Transboundary Effects of Industrial Accidents;

iii. to draft or rapidly update national legislation on the prevention and limitation of major accidents in certain industrial activities, in accordance with the aforementioned international conventions, and drawing on European Union Directive 96/82/EC;

iv. to improve the dissemination of information about good practices in the prevention and limitation of major accidents already pursued by certain member states;

- v. to develop a major accident risk limitation policy in respect of activities not covered by the aforementioned international and European regulations, particularly in the context of industrial activities involving the presence of dangerous substances in quantities below the thresholds set by regulations or where dangerous substances are transported through pipelines;
- vi. clearly to define the responsibilities of the various authorities concerned by spatial planning policy, especially in respect of industrial hazard prevention and management;
- vii. to develop appropriate regulations, especially in respect of:
  - a. the granting of permission to build new homes near existing industrial establishments;
  - b. the granting of planning permission for new hazardous establishments or for significant extensions to such establishments, especially when there are homes nearby;
  - c. the monitoring of industrial activities in hazardous establishments, where the organisation of regular and thorough inspections is concerned;
  - d. the prohibition of operations if serious deficiencies are found;
- viii. to step up efforts rapidly to catch up the considerable delay noted in the preparation and testing of emergency plans for the establishments concerned;
- ix. to encourage their local and regional authorities to conclude transfrontier co-operation agreements on the prevention of industrial hazards and on collaboration in the event of an accident, drawing on the model agreements set out in the European Outline Convention on Transfrontier Co-operation between Territorial Communities or Authorities.

9. The Assembly also invites:

- i. the member states of the "EUR-OPA Major Hazards" Open Partial Agreement of the Council of Europe to take further their work and co-operation in respect of the study, prevention and management of major industrial hazards;
- ii. the European Conference of Ministers responsible for Regional Planning (CEMAT) to study in depth the siting of hazardous industrial establishments in relation to residential areas and to make proposals with a view to a harmonisation of the relevant European spatial planning policies.

10. The Assembly also invites the European Commission and the member states of the European Union:

- i. to work for the rapid setting up of the technical databank referred to in Article 19 of Directive 96/82/EC;
- ii. to make all the knowledge accumulated at Community level available to the other Council of Europe member states.

II. Explanatory memorandum by Mrs Svetlana Smirnova\*

**Contents**

<b>1.</b>	<b>Legislation at international level .....</b>	<b>3</b>
1.1	Convention n° 174 concerning the Prevention of Major Industrial Accidents, adopted in Geneva on 22 June 1993 by the General Conference of the International Labour Organisation at its 80 <sup>th</sup> session	
1.2	The UNECE Convention on the Transboundary Effects of Industrial Accidents, Signed in Helsinki on 17 March 1992	
<b>2.</b>	<b>Legislation at European level: Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards Involving Dangerous Substances.....</b>	<b>12</b>
2.1	Aims and scope	
2.2	Major-accident prevention policy	
2.3	Land use planning	
2.4	Prohibition of use	
2.5	Inspections	
<b>3.</b>	<b>Legislation at national level .....</b>	<b>18</b>
3.1	Application of current legislation on the ground	
3.2	Instruments available for determining incompatible functions	
	<i>Appendix I: Questionnaire .....</i>	<i>22</i>
	<i>Appendix II: Results of the Questionnaire .....</i>	<i>24</i>

\* The rapporteur thanks the previous rapporteur, Mr Jacques Timmermans, for his work on the preparation of the report.

## 1. Legislation at international level

### 1.1 *Convention n° 174 concerning the Prevention of Major Industrial Accidents, adopted in Geneva on 22 June 1993 by the General Conference of the International Labour Organisation at its 80th session*<sup>1</sup>

There are currently two international instruments that address the problems associated with major non-nuclear industrial accidents, namely the International Labour Organisation's Convention n° 174 and the UNECE Convention on the Transboundary Effects of Industrial Accidents.

This report examines the content of the two conventions and the state of their ratification by Council of Europe member states.

The Convention on the Prevention of Major Industrial Accidents was adopted in Geneva on 22 June 1993 by the 80th session of the General Conference of the International Labour Organisation. It came into force internationally on 3 January 1997.

#### i. Aims and scope

The convention's purpose is *the prevention of major accidents involving hazardous substances and the limitation of the consequences of such accidents*. The convention applies to major hazard installations.

It *does not apply to*: a) nuclear installations and plants processing radioactive substances, except for facilities handling non-radioactive substances at these installations; b) military installations; or c) transport outside the site of an installation other than by pipeline.

A member state ratifying the convention may, after consulting the representative organisations of employers and workers concerned and other interested parties who may be affected, exclude from the application of the convention installations or branches of economic activity for which equivalent protection is provided.<sup>2</sup>

#### ii. Progressive implementation

Where special problems of a substantial nature arise so that it is not immediately possible to implement all the preventive and protective measures provided for in the Convention, a member state shall draw up plans, in consultation with the most representative organisations of employers and workers and with other interested parties who may be affected, for the progressive implementation of the said measures within a fixed time-frame.<sup>3</sup>

#### iii. Definitions

For the convention's purposes, the term *hazardous substance* means a substance or mixture of substances which by virtue of chemical, physical or toxicological properties, either singly or in combination, constitutes a hazard. The term *threshold quantity* means for a given hazardous substance or category of substances that quantity, prescribed in national laws and regulations by reference to specific conditions, which if exceeded identifies a major hazard installation. The term *major hazard installation* means one which produces, processes, handles, uses, disposes of or stores, either permanently or temporarily, one or more hazardous substances or categories of substances in quantities which exceed the threshold quantity. The term *major accident* means a sudden occurrence - such as a major emission, fire or explosion - in the course of an activity within a major hazard installation, involving one or more hazardous substances and leading to a serious danger to workers, the public or the environment, whether immediate or delayed. The term *safety report* means a written

<sup>1</sup> <http://www.ilo.org>

<sup>2</sup> Article 1

<sup>3</sup> Article 2

presentation of the technical, management and operational information covering the hazards and risks of a major hazard installation and their control, and providing justification for the measures taken for the safety of the installation. The term *near miss* means any sudden event involving one or more hazardous substances which, but for mitigating effects, actions or systems, could have escalated to a major accident.<sup>4</sup>

iv. Member states' general responsibilities

In the light of national laws and regulations, conditions and practices, and in consultation with the most representative organisations of employers and workers and with other interested parties who may be affected, each member state is required to *formulate, implement and periodically review a coherent national policy concerning the protection of workers, the public and the environment against the risk of major accidents.*

This policy shall be implemented through *preventive and protective measures* for major hazard installations and, where practicable, *shall promote the use of the best available safety technologies.*<sup>5</sup>

The competent authority, or a body approved or recognised by the competent authority, is required, after consulting the most representative organisations of employers and workers and other interested parties who may be affected, to establish a system for the identification of major hazard installations as defined in Article 3 (c), based on a list of hazardous substances or of categories of hazardous substances or of both, together with their respective threshold quantities, in accordance with national laws and regulations or international standards. The system must be regularly reviewed and updated.<sup>6</sup>

v. Employers' responsibilities

Employers are required to *identify any major hazard installation* within their control on the basis of the system referred to in Article 5.<sup>7</sup>

They are required to *notify the competent authority of any major hazard installation which they have identified:* within a fixed time-frame for an existing installation or, in the case of new installation, before it is put into operation.

Employers must also notify the competent authority before any permanent closure of a major hazard installation.<sup>8</sup>

In respect of each major hazard installation employers are required to *establish and maintain a documented system of major hazard control* which includes provision for:

1) the *identification and analysis of hazards* and the *assessment of risks* including consideration of possible interactions between substances;

2) *technical measures*, including design, safety systems, construction, choice of chemicals, operation, maintenance and systematic inspection of the installation;

3) *organisational measures*, including training and instruction of personnel, the provision of equipment in order to ensure their safety, staffing levels, hours of work, definition of responsibilities, and controls on outside contractors and temporary workers on the site of the installation;

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<sup>4</sup> Article 3

<sup>5</sup> Article 4

<sup>6</sup> Article 6: The competent authority, after consulting the representative organisations of employers and workers concerned, shall make special provision to protect confidential information transmitted or made available to it in accordance with Articles 8, 12, 13 or 14, whose disclosure would be liable to cause harm to an employer's business, so long as this provision does not lead to serious risk to the workers, the public or the environment.

<sup>7</sup> Article 7

<sup>8</sup> Article 8

4) *emergency plans and procedures* including:

- the preparation of effective site emergency plans and procedures, including emergency medical procedures, to be applied in case of major accidents or threat thereof, with periodic testing and evaluation of their effectiveness and revision as necessary;
- the provision of information on potential accidents and site emergency plans to authorities and bodies responsible for the preparation of emergency plans and procedures for the protection of the public and the environment outside the site of the installation;
- any necessary consultation with such authorities and bodies;

5) measures to limit the consequences of a major accident;

6) consultation with workers and their representatives;

7) improvement of the system, including measures for gathering information and analysing accidents and near misses. The lessons so learnt must be discussed with the workers and their representatives and recorded in accordance with national law and practice.<sup>9</sup>

Employers are required to prepare a *safety report* based on the requirements of Article 9. In the case of existing major hazard installations the report must be prepared within a period after notification prescribed by national laws or regulations, and in the case of any new major hazard installation, before it is put into operation.<sup>10</sup>

Employers must review, update and amend the safety report: a) in the event of a modification which has a significant influence on the level of safety in the installation or its processes or in the quantities of hazardous substances present; b) when developments in technical knowledge or in the assessment of hazards make this appropriate; c) at intervals prescribed by national laws or regulations; (d) at the request of the competent authority.<sup>11</sup>

Employers are required to transmit or make available the safety reports to the competent authority.<sup>12</sup>

Employers must inform the competent authority and other bodies designated for this purpose as soon as a major accident occurs.<sup>13</sup>

Within a fixed time-frame after a major accident, they are required to present a *detailed report* to the competent authority containing an *analysis of the causes of the accident* and *describing its immediate on-site consequences and any action taken to mitigate its effects*. The report shall include recommendations detailing actions to be taken to prevent a recurrence.<sup>14</sup>

## vi. Off-site emergency preparedness

Taking into account the information provided by the employer, *the competent authority* must ensure that emergency plans and procedures containing provisions for the protection of the public and the environment outside the site of each major hazard installation are established, updated at appropriate intervals and coordinated with the relevant authorities and bodies.<sup>15</sup>

The competent authority is required to ensure that: a) information on safety measures and the correct behaviour to adopt in the case of a major accident is disseminated to members of the public liable to be affected by a major accident without their having to request it and that such information is updated and re-disseminated at appropriate intervals; b) warning is given as soon as possible in the case of a

<sup>9</sup> Article 9

<sup>10</sup> Article 10

<sup>11</sup> Article 11

<sup>12</sup> Article 12

<sup>13</sup> Article 13

<sup>14</sup> Article 14

<sup>15</sup> Article 15

major accident; and c) where a major accident could have transboundary effects, the information required in a) and b) is provided to the states concerned, to assist in cooperation and coordination arrangements.<sup>16</sup>

vii. Siting of major hazard installations

The competent authority must establish a *comprehensive siting policy* arranging for the *appropriate separation of proposed major hazard installations from working and residential areas and public facilities*, and appropriate measures for existing installations. This policy must reflect the General Principles set out in Part II of the Convention.<sup>17</sup>

viii. Inspection

The competent authority must have properly qualified and trained staff with the appropriate skills, and sufficient technical and professional support, to inspect, investigate, assess, and advise on the matters dealt with in this Convention and to ensure compliance with national laws and regulations. Representatives of the employer and representatives of the workers of a major hazard installation must have the opportunity to accompany inspectors supervising the application of the measures prescribed in pursuance of this Convention, unless the inspectors consider, in the light of the general instructions of the competent authority, that this may be prejudicial to the performance of their duties.<sup>18</sup>

The competent authority must have the right to suspend any operation which poses an imminent threat of a major accident.<sup>19</sup>

ix. Rights and duties of workers and their representatives

The workers and their representatives at a major hazard installation must be consulted through appropriate cooperative mechanisms in order to ensure a safe system of work. In particular, the workers and their representatives shall:

a) be adequately and suitably informed of the hazards associated with the major hazard installation and their likely consequences;

b) be informed of any orders, instructions or recommendations made by the competent authority;

c) be consulted in the preparation of, and have access to, the following documents:

- the safety report;
- emergency plans and procedures;
- accident reports;

d) be regularly instructed and trained in the practices and procedures for the prevention of major accidents and the control of developments likely to lead to a major accident and in the emergency procedures to be followed in the event of a major accident;

e) within the scope of their job, and without being placed at any disadvantage, take corrective action and if necessary interrupt the activity where, on the basis of their training and experience, they have reasonable justification to believe that there is an imminent danger of a major accident, and notify their supervisor or raise the alarm, as appropriate, before or as soon as possible after taking such action;

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<sup>16</sup> Article 16

<sup>17</sup> Article 17

<sup>18</sup> Article 18

<sup>19</sup> Article 19



f) discuss with the employer any potential hazards they consider capable of generating a major accident and have the right to notify the competent authority of those hazards.<sup>20</sup>

Workers employed at the site of a major hazard installation are required to:

- comply with all practices and procedures relating to the prevention of major accidents and the control of developments likely to lead to a major accident;
- comply with all emergency procedures should a major accident occur.<sup>21</sup>

#### x. Responsibility of exporting states

When, in an exporting member state, the use of hazardous substances, technologies or processes is prohibited as a potential source of a major accident, the information on this prohibition and the reasons for it shall be made available by the exporting member state to any importing country.

#### Appraisal

This convention lays down principles for the prevention of major chemical accidents and the limitation of their consequences, which are accepted throughout the world. It applies to all major hazard installations on the territory of the contracting parties but it allows the parties a large measure of discretion in identifying and designating the installations concerned, inasmuch as threshold quantities are to be prescribed in national laws and regulations. The convention attaches particular importance to the involvement of workers and their organisations in the preparation of preventive policies both nationally and at the level of individual installations. It also addresses the problems of siting major hazard installations, while leaving national authorities responsible for establishing siting policies and providing for a distinction to be made in this regard between existing and new situations.

#### State of ratification

Although almost all the Council of Europe member states are also members of the International Labour Organisation,<sup>22</sup> only a very few of them – to date, Albania, Armenia, Belgium, Estonia, the Netherlands and Sweden – have ratified the convention.<sup>23</sup>

### 1.2 *The UNECE Convention on the Transboundary Effects of Industrial Accidents, signed in Helsinki on 17 March 1992*<sup>24</sup>

The Convention on the Transboundary Effects of Industrial Accidents was signed under the auspices of the United Nations Economic Commission for Europe (in Helsinki on 17 March 1992).<sup>25</sup> Its provisions closely reflect the content of the Seveso Directive (see 1.1.3).

#### i. Definitions and scope

The convention defines an "industrial accident" as an event resulting from an uncontrolled development in the course of any activity involving hazardous substances, notably during manufacture, use, storage, handling or disposal of such substances. Its provisions apply where hazardous substances are present or may be present in quantities at or in excess of the threshold quantities listed in Annex I of the convention and are capable of causing direct or indirect *transboundary effects on inter alia* human beings, flora, fauna, soil, water, air, landscape and material assets including cultural heritage (Article 1). The convention also applies to industrial accidents caused by natural disasters and capable of producing transboundary effects.

<sup>20</sup> Article 20

<sup>21</sup> Article 21

<sup>22</sup> Only Andorra and Liechtenstein are not members.

<sup>23</sup> *Moniteur belge*, 11.08.2004, p. 59609.

<sup>24</sup> This section is based on: F. Maes, "Deel II. Milieu en internationaal recht", in K. Deketelaere (ed.), *Handboek Milieurecht*, La Chartre, Bruges, 2001, 162-165.

<sup>25</sup> OJ L 3 December 1998, n° 326, 6

The convention *does not apply to*: (1) nuclear accidents or radiological emergencies; (2) accidents at military installations; (3) dam failures, with the exception of the effects of industrial accidents caused by such failures; (4) land-based transport accidents with the exception of emergency response to such accidents and transportation on the site of the hazardous activity; (5) accidental release of genetically modified organisms; (6) accidents caused by activities in the marine environment, including seabed exploration or exploitation; and (7) spills of oil or other harmful substances at sea (Article 2).

ii. Prevention of serious accidents

Industrial accidents are to be avoided insofar as possible by reducing their frequency and severity and by mitigating their effects through preventive, preparedness and response measures, including restoration measures. Each Party to the convention must ensure that operators are obliged to take all measures necessary for the safe performance of the hazardous activity and for the prevention of industrial accidents (Article 3).

iii. Identification of installations concerned

Contracting Parties are required in the first instance to identify hazardous activities within their jurisdiction so that they can ensure potentially affected Parties are notified of them. At the initiative of any one among them, Parties must enter into discussions on the identification of those *hazardous activities that are, reasonably, capable of causing transboundary effects*. If the Parties concerned do not agree on whether an activity is such a hazardous activity, any such Party may submit the question to an inquiry commission comprising three scientific or technical experts. The procedure to be followed by such an inquiry commission is set out in Annex II to the convention. Contracting Parties that have proposed or existing hazardous activities within their jurisdiction must notify potentially affected parties of them and, at the request of those Parties, apply the procedures set out in Annex III to the convention. Part of this consultation procedure involves informing the public in areas likely to be affected by the hazardous activity and providing for comments and objections to be made (Article 4).

iv. Operators' responsibilities

In order to prevent industrial accidents the contracting Parties and operators involved in hazardous activities must take measures to reduce the risk of such accidents. A list of preventive measures is set out in Annex IV to the convention. Operators are required to demonstrate the safe performance of hazardous activities. They may do so by providing information, for example on basic details of the process, including analysis and evaluation as described in Annex V to the convention (Article 6).

v. Siting of installations

During decision making on the siting of new hazardous activities and on significant modifications to existing hazardous activities, the contracting Party of origin is required to seek the establishment of policies designed to minimise risk to the population and the environment of all affected Parties (Article 7).

vi. Contingency plans

All contracting Parties are required to take appropriate measures for emergency preparedness in order to be able to respond to industrial accidents and mitigate their transboundary effects. An indicative list of such measures appears in Annex VII to the convention. In particular, Parties concerned are required to inform one another of their contingency plans, including suitable response measures and other measures to prevent and minimise transboundary effects. The Parties concerned

must endeavour to make their contingency plans compatible. Where appropriate, joint off-site contingency plans must be drawn up in order to facilitate the adoption of adequate response measures (Article 8).

Parties are required to ensure that adequate information is given to the public in the areas capable of being affected by an industrial accident. This information must include the elements contained in Annex VIII to the Convention and should take into account matters set out in Annex V.

Parties must give the public in the areas capable of being affected an opportunity to participate in relevant procedures with the aim of making known its views and concerns on prevention and preparedness measures. The opportunity given to the public of the affected Party in this respect must be equivalent to that given to the public of the Party of origin. Natural or legal persons who are being or are capable of being adversely affected by the transboundary effects of an industrial accident must be given access to relevant administrative and judicial proceedings, including the possibilities of starting a legal action and appealing a decision affecting their rights. Such access to and treatment in the relevant proceedings must be equivalent to those available to persons within the jurisdiction of the Party of origin (Article 9).

#### vii. Industrial accident notification and response systems

Contracting Parties must also provide for the establishment and operation of industrial accident notification systems. In the event of an industrial accident, such notification must include the elements contained in Annex IX to the convention. Should an industrial accident occur, the contingency plans drawn up must be activated as soon as possible (Article 10).

The Parties are required to ensure that adequate response measures are taken using the most efficient practices, to contain and minimize effects. In the event of an industrial accident capable of causing transboundary effects, the Parties concerned must endeavour to coordinate their response measures (Article 11).

The Parties must also render assistance to one another. Where Parties do not have bilateral or multilateral agreements which cover their arrangements for providing mutual assistance, the assistance is to be rendered in accordance with Annex X to the convention, unless the Parties agree otherwise (Article 12).

#### viii. Other provisions

The Parties are also required to promote scientific and technological cooperation, including research into less hazardous processes (Article 14), to exchange information (including elements mentioned in Annex XI) (Article 15) and to exchange technology for the prevention of, preparedness for and response to the effects of industrial accidents (Article 16). In exchanging information the Parties may apply restrictions designed to protect information related to personal data, industrial and commercial secrecy, including intellectual property, or national security (Article 22).

#### ix. Protocol on civil liability<sup>26</sup>

Since the "Environment for Europe" Ministerial Conference<sup>27</sup> in Kiev on 21 May 2003, 24 countries<sup>27</sup> signed the Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters. Taking into account the general principle of international environmental law that the "polluter pays", the protocol aims to provide for a comprehensive regime for civil liability and for adequate and prompt compensation for damage caused by the transboundary effects of industrial accidents on transboundary waters (Article 1). The protocol

<sup>26</sup> [http://www.unep.org/env/civil-liability/documents/protocol\\_e.pdf](http://www.unep.org/env/civil-liability/documents/protocol_e.pdf)

<sup>27</sup> Including the following Council of Europe member states: Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Cyprus, Denmark, Estonia, Finland, Georgia, Greece, Hungary, Latvia, Lithuania, Luxembourg, Moldova, Monaco, Norway, Poland, Portugal, Romania, Sweden, Ukraine, United Kingdom. Hungary ratified it on 25 June 2004.

applies only to damage suffered in a Party other than the Party where the industrial accident has occurred (Article 3(2)). Operators of certain industrial installations whose operation is defined, under the terms of Annex 1 to the protocol, as a hazardous activity due to the presence of hazardous substances in certain quantities, are liable for the damage caused by an industrial accident (Article 4). Only in exceptional circumstances, defined in Article 4(3), is an operator not liable. Liability is limited to the amounts specified in part one of Annex 2. Operators are required to cover liability for this risk by financial security in respect of amounts not less than the minimum limits specified in part two of Annex 2.

### Appraisal

In terms of basic principles this convention strongly resembles that of the ILO. It differs, however, in certain important respects. Unlike the ILO convention, it *applies only to hazardous installations at which accidents might be capable of causing transboundary effects* and not, therefore, to all hazardous installations on the territories of the contracting Parties. In effect it concerns mainly installations in border areas. The UNECE convention also *goes into much more detail* about the installations to which it relates. Annex 1 lays down threshold values. The procedures to be followed in identifying installations concerned and implementing transboundary cooperation are precisely defined. Preventive measures to be taken and the content of safety reports and contingency plans are also set out in considerable detail. The same is true of the provisions on information to the public, procedure to be followed in the event of a serious accident and the rendering of mutual assistance.

### State of ratification

The European Community is a Party to this convention. The convention has been ratified by 27 Council of Europe member states and three states that are not members (Kazakhstan, Monaco and Belarus). To date, the following Council of Europe member states have not ratified the convention: Andorra, Belgium, Bosnia and Herzegovina, Cyprus, Georgia, Ireland, Iceland, Liechtenstein, Macedonia, Malta, the Netherlands, Portugal, San Marino, Serbia and Montenegro, Turkey and Ukraine.<sup>28</sup>

## **2. Legislation at European Union level: Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards involving Dangerous Substances**

The accident that occurred from 10-12 July 1976 due to emission of the toxic gas known as dioxin from the Hoffmann-Laroche plant in Seveso (Italy), led directly to the first European Community legislation on this subject. The set of rules subsequently laid down – and better known as the Seveso Directive – has since been reviewed twice, in the wake of accidents at Bhopal and Basle respectively.<sup>29</sup> On the basis of experience with implementation of the initial text,<sup>30</sup> it was reviewed and replaced by another directive, known as Seveso-II,<sup>31</sup> which is much broader in scope and takes account not only of technical factors but also of managerial and organisational factors that are often the underlying cause of serious accidents.<sup>32</sup> In Seveso II particular attention is also paid to the increased risk that arises when inhabited areas are in close proximity to hazardous activities.<sup>33</sup> In addition it is concerned with improving the exchange of information between Member States and devotes particular attention to the potential transboundary effects of serious accidents and to compliance with regulations, notably by means of regular inspection. The directive's scope was

<sup>28</sup> <http://www.unece.org/env/teia/parties.htm> (situation at the beginning of August 2004)

<sup>29</sup> Directive 82/501/EEC of 24 June 1982 on the Major Accident Hazards of Certain Industrial Activities, OJ L 1982, n° 230, err. OJ L 1982, n° 289, as amended by Council Directive 87/216/EEC of 19 March 1987 amending Directive 82/501/EEC on the Major Accident Hazards of Certain Industrial Activities, OJ L 1987, n° 85, and by Council Directive 88/610/EEC of 24 November 1988 amending Directive 82/501/EEC on the Major Accident Hazards of Certain Industrial Activities, OJ L 1988, n° 336

<sup>30</sup> Report on the application in the Member States of Directive 82/501/EEC of 24 June 1982 on the Major Accident Hazards of Certain Industrial Activities for the period 1997-1999, OJ C 2002, n° 28

<sup>31</sup> Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards involving Dangerous Substances, OJ L 1997, n° 10, err. OJ L 1997, n° 124, amplified by Commission Decision 98/433/EC on Harmonized Criteria for Dispensations according to Article 9 of Council Directive 96/82/EC on the Control of Major-Accident Hazards involving Dangerous Substances, OJ L 1998, n° 192

<sup>32</sup> Recital 15

<sup>33</sup> As well as the Bhopal accident, the accident in Mexico City is also mentioned in this regard (Recital 4).

extended further<sup>34</sup> following industrial accidents at Baia Mare (Romania) in January 2000, Enschede (Netherlands) in May 2000 and Toulouse (France) in September 2001 and in the light of studies on carcinogenic and environmentally hazardous substances.

## 2.1 Aims and scope

The directive is aimed at the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for man and the environment, with a view to ensuring high levels of protection throughout the Community in a consistent and effective manner.

The directive applies equally to what are known as "small" and "large" Seveso plants. "Small" Seveso plants are those where dangerous substances are present in quantities equal to or in excess of the quantities listed in Annex I, Parts 1 and 2, column 2, but not exceeding the thresholds listed in column 3 of the same annex. "Large" Seveso plants, on the other hand, are those where dangerous substances are present in quantities equal to or in excess of the quantities listed in Annex I, Parts 1 and 2, column 3.<sup>35</sup>

In the terms of the directive the "presence of dangerous substances" means the actual or anticipated presence of such substances in the establishment, or the presence of those which it is believed may be generated during loss of control of an industrial chemical process, in quantities equal to or in excess of the thresholds in Parts 1 and 2 of Annex I of the directive and the Cooperation Agreement.<sup>36</sup>

The directive does not apply, however, to: 1° military establishments, installations or storage facilities; 2° hazards created by ionising radiation; 3° the transport of dangerous substances and intermediate temporary storage by road, rail, internal waterways, sea or air, outside the establishments covered by the directive, including loading and unloading and transport to and from another means of transport at docks, wharves or marshalling yards; 4° the transport of dangerous substances in pipelines, including pumping, outside establishments covered by the directive; 5° activities of the extractive industries concerned with exploration for, and the exploitation of, minerals in mines and quarries or by means of boreholes, with the exception of chemical and thermal processing and storage related to those operations which involve dangerous substances, as defined in Annex I; 6° the offshore exploration and exploitation of minerals, including hydrocarbons; 7° waste land-fill sites, with the exception of operational tailings disposal facilities, including tailing ponds or dams, containing dangerous substances as defined in Annex I, in particular when used in connection with the chemical and thermal processing of minerals.<sup>37</sup>

## 2.2 Major-accident prevention policy

### i. Duties applicable to all establishments

Operators must take all measures necessary to prevent major accidents and to limit their consequences for man and the environment. This is known as the *duty of special care*. They must be capable of proving to the relevant inspection authority at any time that they have taken all the measures necessary as specified in the directive.<sup>38</sup> This is known as the *duty of proof*. The burden of proof rests with the company. Operators must be able to prove in the course of an inspection that they are complying with these general duties.

Operators are required to send the competent authority a *notification* within the following time limits:

- a.° for new establishments, a reasonable period of time prior to the start of construction or operation;
- b.° for existing establishments, by 3 February 2000 at the latest;
- c.° for establishments which subsequently fall within the scope of the directive, within three months after the date on which the directive applies to the establishment concerned (in the case of

<sup>34</sup> Directive 2003/105/EC of the European Parliament and Council of 16 December 2003 amending Council Directive 96/82/EC of 9 December 1996 on the Control of Major-Accident Hazards Involving Dangerous Substances, OJ L 2003, n° 345

<sup>35</sup> Article 2 of the directive

<sup>36</sup> Article 2.1, second subparagraph, of the directive

<sup>37</sup> Article 4 of the directive, as amended by Directive 2003/105/EC

<sup>38</sup> Under Article 5.2 of the directive, Member States must ensure that operators are required to prove to the "competent authority" at any time, in particular for the purposes of the inspections and controls referred to in Article 19 of the directive, that they have taken all the measures necessary as specified by the directive.

establishments which fall within the directive's scope as a result of Directive 2003/105/CE, the relevant date is 1 October 2005).

The *notification* is required to contain the following details:

- the name or trade name of the operator and the full address of the establishment concerned;
- the registered place of business of the operator, with the full address;
- the name or position of the person in charge of the establishment;
- information sufficient to identify the dangerous substances or category of substances involved;
- the quantity and physical form of the dangerous substance or substances involved;
- the activity or proposed activity of the installation or storage facility;
- the immediate environment of the establishment (elements liable to cause a major accident or to aggravate the consequences thereof).<sup>39</sup>

Operators are required to inform the competent authority immediately in the event of:

- a.° any significant increase in the quantity or significant change in the nature or physical form of the dangerous substance present, as indicated in the notification the operator has already provided, or any change in the processes employing it;
- b.° modification of an establishment or an installation which could have significant repercussions on major accident hazards;
- c.° permanent closure of the installation.<sup>40</sup>

ii. Responsibilities of "small" Seveso plants

Operators of such establishments are required to *draw up a document* setting out their major-accident prevention policy, *taking account of the principles contained in Annexe III of the directive*. They must also ensure that the policy is *properly implemented*. The major-accident prevention policy established by the operator must be designed to guarantee a high level of protection for man and the environment by appropriate means, structures and management systems. The document must be available to the inspecting authorities at the company's headquarters.<sup>41</sup>

iii. Responsibilities of "large" Seveso plants

a. *Major-accident prevention policy*

Operators of these establishments must put into effect a major-accident prevention policy guaranteeing a high level of protection for man and the environment, and an efficient safety management system for implementing it. The major-accident prevention policy should be *established in writing and should include the operator's overall aims and principles of action with respect to the control of major-accident hazards*. The *safety management system* should include *the part of the general management system which includes the organisational structure, responsibilities, practices, procedures, processes and resources for determining and implementing the major-accident prevention policy*.

The *safety management system* should address the following issues:<sup>42</sup> 1° organisation and personnel; 2° identification and evaluation of major hazards; 3° operational control; 4° management of change; 5° planning for emergencies; 6° monitoring performance; 7° audit and review.

b. *Domino effect*

Using the information received from operators, the competent authority is required to identify establishments or groups of establishments where the likelihood and the possibility or consequences of a major accident may be increased *because of the location and the proximity of such establishments and their inventories of dangerous substances*. This is known as the *domino effect*. In the case of establishments thus identified the competent authority must ensure that: 1° suitable information is exchanged in an appropriate manner to enable these establishments to take account of the nature and extent of the overall hazard of a major accident in their major-accident prevention

<sup>39</sup> Article 6.2. of the directive

<sup>40</sup> Article 6.4 of the directive as amended

<sup>41</sup> Article 7 of the directive

<sup>42</sup> See Annex III of the directive as amended.

policies, safety management systems, safety reports and internal emergency plans; 2° provision is made for cooperation in informing the public and in supplying information to the competent authority for the preparation of external emergency plans.<sup>43</sup>

#### c. Safety report

Operators are required to produce a safety report for the purposes of: 1° demonstrating that a major-accident prevention policy and a safety management system for implementing it have been put into effect; 2° demonstrating that major-accident hazards have been identified and that the necessary measures have been taken to prevent such accidents and to limit their consequences for man and the environment; 3° demonstrating that adequate safety and reliability have been incorporated into the design, construction, operation and maintenance of any installation, storage facility, equipment and infrastructure connected with its operation which are linked to major-accident hazards inside the establishment; 4° demonstrating that internal emergency plans have been drawn up and supplying information to enable the external plan to be drawn up in order to take the necessary measures in the event of a major accident; 5° providing sufficient information to the competent authorities to enable decisions to be made in terms of the siting of new activities or developments around existing establishments.

The safety report must contain at least the data and information listed in Annex II. It must name the relevant organisations involved in its preparation, and it must also contain an updated inventory of the dangerous substances present in the establishment.<sup>44</sup>

The safety report must be sent<sup>45</sup> to the competent authority within the following time limits: 1° for new establishments, a reasonable period of time prior to the start of construction or of operation; 2° for existing establishments not previously covered by the original Seveso Directive: no later than 3 February 2002; 3° for establishments which subsequently fall within the scope of this directive, without delay, but at all events no later than 1 July 2006; 4° for establishments already covered by the original directive: no later than 3 February 2001; 5° in the case of periodic reviews, without delay.

The safety report must be reviewed periodically and where necessary updated: 1° at least every five years; 2° at any other time at the initiative of the operator or the request of the competent authority, where justified by new facts or to take account of new technical knowledge about safety matters, for example arising from accidents or, as far as possible, "near misses", and of developments in knowledge concerning the assessment of hazards.<sup>46</sup>

In the event of the modification of an installation, establishment, storage facility, or process or of the nature or quantity of dangerous substances which could have significant repercussions on major-accident hazards, the operator must: review and where necessary revise the major accident prevention policy and the management systems and procedures; review and where necessary revise the safety report and inform the competent authority of the details of such revisions in advance of the modification.<sup>47</sup>

#### d. Emergency plans

Operators of "large" Seveso plants must draw up an *internal emergency plan* to: 1° contain and control incidents so as to minimise their effects, and to limit damage to man, the environment and property; 2° implement the measures necessary to protect man the environment from the effects of major accidents. Emergency plans are required to contain the information set out in point 1 of Annex IV.

Operators must supply the competent authorities with the necessary information to enable the latter to draw up external emergency plans. The external emergency plans must be established with the objectives of: 1° containing and controlling incidents so as to minimise the effects, and to limit damage to man, the environment and property; 2° implementing the measures necessary to protect man and the environment from the effects of major accidents; 3° communicating the necessary information to

<sup>43</sup> Article 8 of the directive as amended

<sup>44</sup> Articles 9.1 and 9.2. of the directive as amended

<sup>45</sup> Article 9.3 of the directive as amended

<sup>46</sup> Article 9.5 of the directive

<sup>47</sup> Article 10 of the directive

the public and to the services or authorities concerned in the area; 4° providing for the restoration and clean-up of the environment following a major accident. These emergency plans are required to contain the information set out in point 2 of Annex IV.

Internal and external emergency plans must be reviewed, tested and where necessary revised and updated at suitable intervals of no more than three years. The review shall take into account changes occurring in the establishments concerned or within the emergency services concerned, new technical knowledge and knowledge concerning the response to major accidents.<sup>48</sup>

*e. Informing the public*

The competent authorities must ensure that information on safety measures and on the requisite behaviour in the event of an accident is supplied regularly and in the most appropriate form, without their having to request it, to all persons and all establishments serving the public liable to be affected by a major accident originating in a "large" Seveso plant. Where it is possible that an accident will have transboundary effects the competent authorities in the originating Member State must cooperate with their counterparts in the state liable to be affected. The information must be reviewed every three years and, where necessary, repeated and updated, at least if an establishment is significantly modified. It must also be permanently available to the public. The maximum period between the repetition of the information to the public must in any case, be no longer than five years. Such information shall contain, at least, the information listed in Annex V of the directive.<sup>49</sup>

*f. Action in the event of and following a major accident*

Operators or the competent authorities are required to put *emergency plans* into effect without delay when a major accident<sup>50</sup> occurs or when an uncontrolled event occurs which by its nature could reasonably be expected to lead to a major accident.

As soon as practicable following a major accident, the operator must provide the competent authorities with the following information as soon as it becomes available: 1° the circumstances of the accident; 2° the dangerous substances involved; 3° the data available for assessing the effects of the accident on man and the environment; and 4° the emergency measures taken. The operator must inform them of the steps envisaged: 1° to alleviate the medium- and long-term effects of the accident; and 2° to prevent any recurrence of such an accident and must update the information provided if further investigation reveals additional facts which alter that information or the conclusions drawn.<sup>51</sup>

The competent authority designated by the Member State concerned must collect, by inspection, investigation or other appropriate means, the information necessary for a full analysis of the technical, organisational and managerial aspects of the major accident; its immediate effects and foreseeable subsequent effects, as well as the way in which the major accident was controlled by all parties concerned and the necessary data; it must take appropriate action to ensure that the operator takes any necessary remedial measures; it must make recommendations on future preventive measures; and it must ensure that any necessary medium and long-term measures, as well as environmental reinstatement and clean-up measures, are taken.

### **2.3. Land use planning**

Member States are required to ensure that the objectives of preventing major accidents and limiting the consequences of such accidents are taken into account in their land use policies and/or other relevant policies. They must pursue these objectives through controls on: a) the siting of new establishments; b) modifications to existing establishments covered by Article 10 of the directive;

<sup>48</sup> Article 11.4 of the directive

<sup>49</sup> Articles 13. 1, 13.2 and 13.3 of the directive

<sup>50</sup> An occurrence such as a major emission, fire or explosion resulting from uncontrolled developments in the course of the operation of any establishment covered by the directive, and leading to serious danger to human health, and/or the environment, immediate or delayed, inside or outside the establishment, and involving one or more dangerous substances (Article 3. 5 of the directive).

<sup>51</sup> Articles 14.1, b) and 14.2 of the directive