

**ZRÍNYI MIKLÓS**  
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Presentation of by the author and official commentaries  
on the PhD thesis, reps. entitled

Assessment and Development of the Application Conditions of the Protection of  
the Trans-boundary Effects of Industrial Accidents

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**THESIS BOOKLET**

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**Title of the thesis submitted for PhD:**

Assessment and Development of the Application Conditions of the Protection of  
Trans-Boundary Effects of Industrial Accidents

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**Budapest, 2006.**

## Definition of the scientific problem

The risk of major industrial accidents is inherent in the production, storage, processing and use of dangerous substances being present in economy. Based on recent domestic and international experiences accidents might have even disastrous impact on the environment of the hazardous establishment and the residents living there.

In the world there were numerous **major industrial accidents** that jeopardized also surrounding settlements because of the propagation of the accident beyond the battery limits of the establishment. Such an accident was the dioxin pollution in 1976 in Italy, or the massive poisoning by methyl isocyanate released at the establishment of Union Carbide in 1984 Bhopal, India or the series of explosions destroying a whole district in Mexico City. In some major accidents not only local communities, but due to the propagation beyond national borders also surrounding countries, maybe even states located in downstream catchments areas might be involved. Just remember the accident in 1986 in the Sandoz factory in Switzerland or the cyanide and heavy metal pollution in February 2000 in Baia Mare that caused trans-boundary environmental damage in several countries in the Rhine, Tisza and Danube rivers.

**International cooperating organizations** have established the international (universal) and supranational (regional) rules of the prevention and mitigation of major industrial accidents as early as during the last century. This gave birth to the **Seveso Directives of the EU about the control of major accidents related to dangerous substances** and to the **UNO Convention (Helsinki) on the trans-boundary effects of industrial accidents** prepared by the European Economic Committee of the UNO in 1992 as one of environmental conventions (hereinafter: Convention), and the Convention of the EEC of the UNO on the protection and use of trans-boundary watercourses and international lakes. After the cyanide pollution of the Tisza river a protocol on the common civil responsibility has been drawn up for the Conventions on Industrial Accidents and Water Management.

In spite of the community-level integration of the prevention of industrial accidents dating back to more than two decades in the EU member states, **the Directive undergoes more or less strict modifications every five years**. In West-Europe accidents of international magnitude and disastrous consequences (May 2000 Enschede, September 2001 Toulouse) provided more and more reasons for the modification of the Directive in 2003. Just remember the recent fires of oil establishment, or the river pollution in China being rather far away from us, but becoming one of the highlights of international press.

**In line with the EU integration activity of the country**, and on the basis of the obligations resulting from international obligations, the Hungarian Parliament and the Government have established the **regulation regarding the prevention of major industrial accident prevention** that took effect on January 1, 2002.

International obligations related to the prevention of industrial accidents and to the fulfillment of the Convention, are within the scope of the **Ministry of the Interior, the Ministry of Economy and Transport, and the Ministry of Environment and Water Management**.

In the field of the introduction of the rules on the application of the Convention Hungary starting 2002 the **National Directorate General for Disaster Management of the Ministry of the Interior of Hungary** (hereinafter: NDGDM) acting as competent authority and other state administration organizations obtained numerous practical and dispensation-related experiences. In the field of the prevention of major industrial accidents prevention, preparation and response measures, with the introduction by operators, state and self-government organizations, also the probability of trans-boundary scenarios will drop.

**The Convention is being implemented simultaneously with the fulfillment of the regulation about the prevention of major accidents.** With regard to the objective of the Convention and the legal institutions for the prevention of, preparation for and response to accidents, reps. the provisions of the two regulations are identical.

During the recent five years there were significant results in the horizontal (integrating the safety and legal institutions of several disciplines) field handling so-called non-operational accidental emissions. **Before the accession to the European Union the licensing and supervision system of the authorities was established and regional and local disaster management tasks were completed.** In the course of the operation of the institutions the organizations of the state administration have checked and evaluated safety reports and assessments, internal emergency plans, prepared and applied external emergency plans, and fulfilled their obligations as to the information of the public.

All these **results provide a good basis** for the identification of hazardous activities falling within the scope of the Convention, for the fulfillment of the data supplies between the competent authorities and the contact points, for the operation of the accident alerting and mutual assistance, alerting and information system and for the implementation of bilateral and trans-boundary cooperation tasks.

In accordance with the aforementioned points the topic of the thesis is the scientific examination and assessment of the Hungarian system of legal regulations and institutions of the prevention of the trans-boundary effects of industrial accidents on the basis of the experiences collected in the field of the dispensation and implementation of law. Based on the investigation a proposal will be formulated as to the methods and instruments used for the completion of certain tasks falling within the competence of disaster management organizations being in charge of the tasks of the competent authorities.

### **Investigation objectives**

1. to set up a standardized system of the tasks of the application of the Convention on the basis of the deep analysis, systemization and comparison of the Convention and the provisions of related international environment regulations and on the basis of practical experiences;
2. the comparison of a standardized system of tasks with the Hungarian legal, institutional systems and tasks, where I will analyze the possibilities of harmonizing the data supply by the operator and licensing by the authorities and the supervision, control, the consequence analysis procedures of major accidents, the methodology of external emergency planning and its implementation, the completion of accident reporting tasks and of the development of the tasks according to the reform of public administration;

3. to reveal the strengths and deficiencies of the national and international identification methods of hazardous activities with potential trans-boundary effects by means of comparison-based evaluation;
4. to analyze the possible legal solutions of extending the scope of industrial accident prevention regulation over activities, where dangerous substances not falling within the scope of the major accident prevention regulations are used and the identification methods to be applied in the course of work of the authorities supporting the protection of the public,
5. to analyze internationally accepted procedures and methods applied in the course of the consequence analysis of major accidents, flow, propagation and effect models in particular, where, on the basis of the analyses recommendations might be submitted for their application in major accident prevention regulations;
6. to assess, on the basis of national and international literature, the limits marking the range of heat radiation, overpressure and poisoning caused by major accidents;
7. to evaluate the data supply provisions based on bilateral and boundary cooperation and to establish, by examining possible Hungarian regulations, the required content of data supply, and the possibility to use information from abroad in the planning and application of external emergency plans;
8. to prepare, by checking the reporting and information obligations of the operator of hazardous industrial establishments, a system of standard requirements in the field of the corporate alerting system and the data to be sent to the authorities.

### **Research methods**

In the course of the research I considered scientific well-foundedness, systematic approach, conclusions based on analyses and syntheses, the adaptation of the experiences of similar organizations abroad to the necessary extent **a basic aspect**. My thesis was prepared basically by using objective facts and approaches, however, at the same time, making use of the freedom of the author, I have applied individual statements, solution proposals and approaches.

In my thesis I have applied the following **research methods**:

- a part of the **specialized literature** used in my thesis originates from internal disaster management materials, studies, technical newspaper articles and presentations prepared in the course of the law harmonization, institute development and application of the legal regulations. The figures and tables (indicated as my own contribution) are mainly the result of my analyzing and elaboration work;
- during my research activities I have processed a significant amount of **printed publications** (indicated also as specialized literature) norms, special articles, drafts of the legal rules and instructions of the UNO and EU organizations;

- during the research work I considered the adaptation of the **knowledge acquired at international and integration programs** in the Hungarian legal environment especially important.
- When preparing my thesis, I could make a good use of my practical experiences and knowledge obtained **in consultations conducted with foreign experts of the EU Phare Twinning projects** and during my work as national representative (expert) **in international work groups**.

### **Brief description of the investigation performed**

In the order of my objectives I have **split the thesis into four main parts**, where, in addition to the comparison of the international and national legal system and institutions, I handle also the methods used for the identification of hazardous activities being the basic element of the regulation, and those used for consequence analysis, and also issues of bilateral, boundary and authority data supply and the operation of the alerting system as well.

#### CHAPTER I.

##### Evaluation of the international regulation of the prevention of the transboundary effects of industrial accidents

In order to fulfill my research objectives, first I have examined the place of the regulation of the prevention of the trans-boundary effects of industrial accidents in the legal system of safety, where one of the most important tasks is to determine the link between the Convention and the Directive by applying comparative analyses.

The systematic conclusions of the chapter help lay the foundation of the objectives of the following chapters. Previous scientific analyses were dedicated to vertical links within this field of law. The new element in my thesis is, in order to unveil parallel features and to lay the foundation for separations, the examination of horizontal links between the special fields evaluated.

#### CHAPTER II.

##### Implementation of the Convention in the Hungarian legal, institutional system and tasks

On the basis of my investigations carried out in the second chapter I have **systemized the provisions of the Convention** and I have determined the group of professional tasks within the scope of national tasks. We **have completed the professional tasks by the application of** the regulation on the prevention of major accidents aimed at the implementation of the **Directive**. Making a good use of my experience gained in the application of law, also applying the method of historical review, I have evaluated the enforcement of these provisions in the legal system of Hungary.

In my thesis I have reviewed the legal institutions of the recently modified Hungarian regulation as well. In addition I have checked the information flow and the levels of the execution of professional tasks in order to systemize Hungarian legal institutions.

### CHAPTER III.

#### Identification of hazardous activities and evaluation of the consequences of industrial accidents

The main focus of the thesis requiring technical analyses is the identification of hazardous activities with trans-boundary effects and the evaluation of the effects of accident scenarios associated with the emission of dangerous substances.

First I have evaluated the identification methods of hazardous activities described in the Convention and in the related environment regulations, and then those of the hazardous activities not falling within the scope of the regulation. Furthermore I have examined the possibility of setting up supervision over hazardous activities not falling within the scope of the regulation on the prevention of major accidents. The trans-boundary effects of industrial accidents can be determined by analyzing the consequences of major accidents happening in the identified hazardous activity.

In this chapter of the thesis, by the examination and systemization of systems, processes, effects as components, I have prepared specific recommendations as to the technical requirements to be applied in consequence analysis (external emergency planning) by adapting recommendations from international literature to the Hungarian system.

### CHAPTER IV.

#### Determination of the content of data supply about industrial accidents

One of the important elements of the prevention of accidents with trans-boundary effects, preparation and response to the accident is the data supply by the operator. The data supply is based on information exchange with the objective to make the competent organizations of the endangered country familiar with the data related to the potential danger source on the other side of the border, on the basis of which they can prepare, train, and if necessary, apply their accident response plans.

In order to reach the research objectives I have dedicated two separate chapters to the examination of prevention and preparation and accident response data supply and procedures.

As a result of the evaluation I have submitted a specific proposal as to the content of the data supply by the competent authorities required for the fulfillment of the alerting, information, emergency planning tasks to be completed within the framework of bilateral cooperation and the cooperation of frontier regions and with regard to the utilization of similar information received from abroad for the protection of the public. The operability of Hungarian alerting systems is influenced by the data supplied about hazardous activities and the success of the subsequent procedures of the authorities.

In the second part of the chapter I have examined the system of authority procedures and the accident averting-like data supply by the operator after industrial accidents happening during hazardous activities abroad and in Hungary and I have made specific development proposals.

## Summarized conclusions

### I. In the field of the evaluation of the international regulation on the prevention of the trans-boundary effects of industrial accidents

1. The Convention and the Directive handle first of all the external emergency planning and industrial safety aspects of dangerous substances released in emergencies deviating from normal operation. The field of industrial safety can clearly be separated from environment protection (environment safety).
2. The Convention regulates the information flow related to the prevention of the “trans-boundary” consequences of major accidents in hazardous industrial establishments falling within the scope of the Directive and to preparation and the averting of accidents. By implementing the Directive we can fulfill the technical tasks of the Convention. Bilateral cooperation tasks serve exclusively for the implementation of the Convention. In my opinion we can enforce the interests of Hungary within the framework of the disaster management agreements concluded with the neighboring countries.

### II. With regard to the implementation of the Convention in the Hungarian legal system, institutions and tasks

3. The personal and objective, methodological instruments, the law, institutions, the application of the law required for the implementation of the Directive in Hungary are available. The activity is being carried out according to the schedule of the EU, however, for the implementation, on the basis of the law dispensation by the authorities, the **development of several fields is necessary**, namely: the standardization of the data supply obligation of the operator, and the inspection requirements of the licensing and supervision system; the establishment of the rules (technical requirements) of the procedure and methodology of the consequence analysis of major industrial accidents; development of the preparation and application of external emergency plans and of the reporting system of major accidents.
4. The requirements of the Convention can be fulfilled on national level by bilateral connections and intergovernmental cooperation. The competent authority working on national level and the contact point fulfill their tasks, however, with regard to international connections, bilateral cooperation and the cooperation of frontier regions can be developed in the field of the prevention of industrial accidents, where prevention- and emergency-related information exchange is especially important. One of the most important fields of the implementation of the Convention is the identification of hazardous activities and making sure that the alerting and notification system is operable.
5. In the course of the fulfillment of the Convention the experiences of international platforms can be used and the coordinated activity of industrial accident and water management experts can be ensured.
6. Making use of the possibilities offered in the Convention the legal and technical possibilities of extending disaster management supervision over activities that do not fall within the scope of Directive.



7. The Major Accident Reporting System, in order to ensure fast and efficient transfer of information between national contact points, shall be operated by developing the data transmission system between the operator and the authority.
8. The development of bilateral accident prevention connections, mainly by bilateral exchange of experiences and visits paid to the establishments, shall be continued, where bilateral conventions on disaster management and mutual assistance will continue to be the primary platforms. The identified tasks of the next future will be the completion of written data exchange, and also cooperation in the field of accident prevention between frontier regions can be initiated.

### **III. In the field of the identification of hazardous activities and the analysis of the consequences of industrial accidents**

9. In the method used in the Convention for the identification of hazardous activities the grade of the endangering the public and the environment (the range of major accidents) is not considered. The list of identified activities is not comprehensive, however, in the framework of the bilateral cooperation the scope of hazardous activities can be extended over under-tier establishments as well.
10. Activities falling within the scope of the Directive pose more significant danger in Hungary. There are several methods for the identification of hazardous activities, however the best solution is the extension of the regulation over hazardous activities involving dangerous substances by means of the development of the legal regulations of disaster management and the analysis of the consequences of major accidents. The dangerous character of the identified hazardous activities can be assessed by the analysis of the potential consequences of major accidents only.
11. It is necessary to develop the consequence analysis of major accidents in order to provide for the standard interpretation of the legal requirements in the fields of keeping track of the process of consequence analysis, the establishment of the rules of procedure, the implementation of emission, propagation and effect models according to internationally accepted methods and the introduction of limits used for the measurement of the severity of effects.

### **IV. In the field of the determination of the content of the data supply on industrial accidents**

12. The objective of the prevention and preparation-orientated data supply specified in the Convention is to enable the party involved in the effects of the accident to prepare for averting the consequences of a potential trans-boundary accident through the preparation of emergency plans for the community and by providing information to the public. The safety report and the internal emergency plan are the basis of data supply. Data for the purposes of preparation are supplied by coordinating “trans-boundary” elements of the external emergency plan. For the standardization of the required content of data supply the general and detailed requirements of data supply can be specified.

13. The safety report is the basis of data supply, from where we make use of descriptive information. Filtering the data for “trans-boundary” effects is an important principle. For the purposes of the management of trans-boundary effects the detailed content-related requirements as to the information to be provided shall be specified for the general and external emergency plans. The elaboration of aspects for the exemption from the external emergency plan is an instrument to exempt activities that cannot have trans-boundary effects, from the obligation to prepare external emergency plan. The basis of the exemption is the “absence of danger” and I have elaborated aspects for proving the same.
14. The data supplied about international activities can be used by integrating said data into the danger averting basic plans of Hungarian communities and into alerting and assistance plans.
15. The operability of alerting systems (irrespective of trans-boundary effects) is influenced by the data received about the hazardous activity and the success rate of the subsequent authority procedure.
16. By analyzing the alerting process (unexpected event, extraordinary event and major accident) also the specific aspects of the qualification of the unexpected and extraordinary events with regard to alerting can be determined. In the course of the identification of the qualification aspects of extraordinary events, in accordance with the rules of procedure specified in the safety management system of the establishment and in the internal emergency plan, the attention can be focused on the characteristics of the alerting system of the establishment and on the activation rules of the internal and external emergency plans. The rules of alerting stages to be ordered in case of major accidents can be adapted, in the function of the nature of the scenario and the parameters of the dangerous substance, to the alerting limits applied in the monitoring system of dangerous substances.

### New scientific results

1. By the in-depth analysis, systemization and comparison of the Industrial Accident Convention and of the related international environmental regulations, by means of comparison with practical experiences and on the basis of personal coordination on national and international platforms, **I was the first to systemize the tasks to be completed** and then, on the basis of this standardized system of tasks, comparing this with the existing system, **I have elaborated specific recommendations for the optimization and development of the legal system, institutions and tasks in Hungary**, with the following main fields:
  - a. Recommendations for the further development of the requirements of the licensing by the authorities and supervision control;
  - b. Recommendations for the harmonization of the consequence analysis procedure of major accidents, the methodology of the planning and application of external emergency plans and the execution of accident reporting tasks, reps;

- c. Recommendation as to the system of licensing by the authorities and supervision control and disaster management tasks according to the reform of public administration.
2. On the basis of my international and national experiences and comparative analyses I have **unveiled the strengths and deficiencies of hazardous activities** with trans-boundary effects and on this basis I have elaborated a **specific recommendation** for the **identification of activities where dangerous substances are handled** but which do not fall within the scope of regulation of the prevention of major accidents. Within this I have elaborated a recommendation:
  - a. Elaborated a recommendation for potential legal solutions to extend the industrial accident prevention regulation over the activities concerned;
  - b. For the identification method to be applied in the course of the work of the authority supporting civil protection tasks.
3. Integrating the recommendations into the danger assessment procedure, **I was the first to submit recommendations**, by means of the critical analysis of the international and national literature specializing in this field, for the internationally accepted **procedures** used for the **consequence analysis of industrial accidents, for the applicability of spill, propagation and effect models, where I have submitted specific recommendations**
  - a. For the spill and propagation models related to reference accident scenarios and for effect models;
  - b. For the limits to be used for the marking of heat radiation, overpressure and poisoning ranges of major accidents.
4. By analyzing the bilateral data supply obligation and the data supply based on the cooperation of frontier regions in the field of the prevention of and preparation for industrial accidents and the averting of accidents and by comparing them with experiences collected in the practical application of the law and with the data received from the operator of hazardous establishments **I was the first to elaborate a standardized system of requirements regarding the content of the data to be supplied to the authorities and the application of the same in the system of external emergency planning** required for the fulfillment of alerting (information) tasks and of the tasks of external emergency planning, with the following components:
  - a. Definition of the required contents of the data to be supplied for prevention and preparation purposes;
  - b. The elaboration of aspects for the exemption from the preparation of external emergency plans,
  - c. The methodology to be used for the integration of trans-boundary effects into the emergency planning system of Hungary;

- d. The definition of the term “extraordinary event” and the elaboration of a method for the identification of alerting limits so that the individual stages of the alerting system of the establishment can be ordered.

### **Recommendations of the thesis**

- 1 The contents of my thesis can be used as a basis:
  - For the development of the institutions and tasks of the Industrial Accident Convention in Hungary, for the completion of tasks requiring national and bilateral cooperation, with special emphasis on the industrial accident reporting system and on the identification of hazardous activities;
  - Laying the foundation for the completion of the tasks of the authority and the disaster management organizations in the regulation of the prevention of major accidents, for the methodology of the consequence analysis of major accidents in particular, laying the technical and professional foundation for external emergency planning and in the field of the system of accident reporting by the operator;
  - For the elaboration of the prevention system of industrial accidents and of the identification of disaster management activities related to dangerous substances.
- 2 For the preparation of the internal regulations supporting the application of law, the professional concepts of the rules related to the implementation of the contents of clause 1, for the preparation of methodological guides and for the elaboration of implementation plans and for setting priorities.
- 3 My thesis can be utilized in the education and training system professional disaster management organizations and of the Zrínyi Miklós University of Defense, and in the curriculum of technical, non-defense orientated colleges and universities specializing in processes used in the chemical industry and in plant safety.
- 4 The investigations performed in the thesis can be used as a basis for the determination of research objectives in the field of industrial and environmental safety.

I hereby want to thank for my director of studies, my consultation partners, all my colleagues and for all, who helped me in the preparation of my thesis through their work and proposals.

## List of publications

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  - a. 3.9 fejezet: a súlyos balesetek országhatáron túli hatásaival kapcsolatos tevékenység *activity related to the trans-boundary effects of major accidents* (297-307. o.)
  - b. 3.10 fejezet: EU illetékes hatósági feladatok *tasks of the competent authorities in the EU* (307-311. o.)
  - c. 4. fejezet: Az önkormányzatok és a katasztrófavédelem közös feladatai *Common tasks of the municipalities and disaster management organizations* (311-371. o)

2. Kátai-Urbán L., Dr. Szakál B., Kockázatkezelési eljárások áttekintése, *Review of risk management procedures* (11-68. o.), In.: Cimer Zs., Cseh G., Deák Gy., Gyenes Zs., Hoffmann I., Kátai-Urbán L., Solymosi J., Szakál B., Vass Gy.: Ipari biztonsági kockázatkezelési kézikönyv a veszélyes anyagokkal kapcsolatos súlyos balesetek elleni védekezés szabályozás alkalmazásához, KJK-KERSZÖV kiadványa, Budapest 2004. *Industrial safety risk management handbook for the application of the regulation of the prevention of major accidents involving dangerous substances*;
3. Kátai-Urbán L.: 5. Lakossági tájékoztatás, author of *Information to the public* (40-53. o) és a 7.4 A lakossági tájékoztatás okmányai *Documents to inform the public* (99-107. o.) c. fejezet szerzője, In.: „Módszertani segédlet a veszélyes anyagokkal kapcsolatos súlyos ipari balesetek elleni védekezés területi és helyi feladatainak ellátásához” c. BM OKF lektorált angol nyelvű kiadványa, 2005 *Methodological aid for the regional and local tasks of the prevention of major industrial accidents involving dangerous substances*;
4. Kátai-Urbán L.: „5. Information to the public” és a „7.4 Documents to inform the public” c. fejezet szerzője, c. In.: “Guidance on the implementation of regional and local tasks for the prevention of major accidents involving dangerous substances” BM OKF lektorált kiadványa (54-64.o), 2005.

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1. Popelyák P., Kátai L., Szakál B.: Katasztrófa-megelőzés, főiskolai jegyzet, a Rendőrtiszti Főiskola kiadványa, Budapest, 2005. *Disaster prevention, college notes*;
2. Szakál B., Vass Gy. Kátai-Urbán L.: Katasztrófavédelem I., vegyipari katasztrófák SZIE Ybl Miklós Főiskolai Kar, TÜBI szakkönyve, 2004 *Disaster management I. disasters in the chemical industry*.

### **Presentations published in conference papers**

#### **In English language**

1. “Approximation of the EU Environmental Legislation in the Field of Water” c. tanfolyamon a “SEVESO II. Directive” c. előadás; Budapest, Vituki; 1999. április. 12.;
2. Ipari Biztonsági és Védelmi-tervezési Nemzetközi Konferencia: a „Lakosság tájékoztatás szerepe a veszélyes anyagokkal kapcsolatos súlyos balesetek következményeinek csökkentésében”, Public Awareness and Information in the Context of Major Accidents involving Dangerous Substances, megjelent angol nyelven az ENSZ EGB Ipari Baleset-megelőzési Regionális Koordinációs Központ kiadványaként; Balatonfüred; 1999. május. 10-12.;
3. Európai Bizottság Közösségi Kutatási Központ SEVESO II. irányelv Bevezetéséről szóló Konferenciája: Hungarian Experience in transposing SEVESO II. DIRECTIVE into National Law, London; 2000. november. 06-08.;
4. PHARE Twinning „A” Project közbeső jelentéséről szóló Munkaműhely: Veszélyes üzemek engedélyezése („Operation of the Licensing and Inspection System for Dangerous Substances”); Budapest; 2001. február. 27.; megjelent ”Gyűjtemény a Phare Twinning Project HU98/IB-EN-01 rendezvények keretében tartott előadásokról” c. BM OKF kiadványában (2001. Budapest);
5. ENSZ Környezeti Program – Európai Gazdasági Bizottsága, Regionális Környezetvédelmi Egyezmények Munkaértekezlete: Hungarian Experience with the Ratification and Implementation of the UN ECE Industrial Accident Convention; Belgrád; 2001. november. 14-16. megjelent a Szerb Környezetvédelmi Minisztérium kezelésében;

6. ENSZ EGB Ipari Baleseti Egyezmény 2. Konferenciája. Hungarian Experience in Establishment and Extension of Bilateral and Cross Border Cooperation with Neighbouring Countries in the Field of Prevention of, Preparedness for and Response to Industrial Accidents; Kisinyov; 2002. november. 06-08.;
7. SEVESO II. Irányelv végrehajtásáról szóló katasztrófavédelmi szerek együttműködésének keretében megrendezett munkaértekezlet: Implementation of Seveso II. Directive in Hungary.; Czeszochowa, Lengyelország, 2003. április 07-08.;
8. SEVESO II. Irányelv végrehajtásáról szóló továbbképző tanfolyam: Implementation of Seveso II. Directive in Hungary; Pozsony, Szlovákia; 2003. április 28-29.;
9. Európai Stabilitási Egyezmény ELSSEDIMA, RO 2003. környezetvédelmi szabályozásról és a katasztrófavédelemről szóló Nemzetközi Konferenciája: Calimanesti-Caciulata, Románia; 2003. augusztus 28-29.;
10. Helsinki Egyezmény Kapcsolattartó Pontjainak megbeszélése és továbbképzése: Tasks of the Hungarian Point of Contact Within the Framework of the Industrial Accidents Convention c. előadás tartása a magyar kapcsolattartó pont működéséről.; Pozsony, Szlovákia; 2003. november 10 – 11.; megjelent a szlovák Környezetvédelmi Minisztérium kiadásában;
11. „Implementing the Seveso II. Directive: Experience and Results” c. szeminárium: Hungarian Experience in the Prevention of Major Accidents Hazards, 2004. december 2-3, Pozsony, megjelent a Szlovák Környezetvédelmi Minisztérium kiadványában;
12. „Mutual Joint Visit in Hungary” Implementation of regional and local tasks for the prevention of major accidents involving dangerous substances “: Land use planning, technical requirements”, Tiszaújváros, 2005. szeptember 28-30. BM OKF, 2005.
13. CEI Conference titled „Industrial and Transporting Accident Prevention and Response”: International prescriptions of emergency response planning of marshalling yards, Balatonföldvár, 2005. október 24-25. BM OKF 2005.

### **In Hungarian language**

1. Veszélyes anyagok I. Konferenciája „Ammónia” *1<sup>st</sup> conference about dangerous substances: Súlyos ipari balesetek elleni védekezés jogi szabályozásának helyzete Situation of the legal regulations of the prevention of major industrial accidents; Gyula.; 1998. november 18-20.; megjelent published by Gépipari Tudományos Egyesület kiadásában (85-88.o.);*
2. Veszélyes üzemek biztonsági vezetőinek 1. konferenciája, Pécel; 2001. február. 26. *1<sup>st</sup> conference for the safety managers of hazardous establishments, Pécel, February 26, 2001:*
  - a. Lakossági tájékoztatás és nyilvánosság biztosítása *Information to the public and publicity.*
  - b. Üzemeltetői adatszolgáltatás, biztonsági jelentés és a biztonsági elemzés; c. előadások *Presentations entitled “data to be supplied by the operator”, “safety report” and “safety assessment”;*

”Phare Twinning Project HU98/IB-EN-01 rendezvények keretében tartott előadásokról” *Publication of the NDGDM of the MI about the presentations held at the programs organized within the framework of the Phare Twinning Project HU98/IB-EN-01 c. BM OKF kiadvány (2001. Budapest);*
3. Veszélyes anyagok közúti szállítása konferencia *Conference: Road transportation of dangerous substances: A veszélyes anyagok közúti szállítása és a Seveso II. EU Irányelv kapcsolata, Relationship of the road transportation of dangerous substances and the Seveso II. Directive, Pécel, 2001. szeptember 26-27.; BM OKF 2001.;*



4. PHARE Twinning „B” Projekt Továbbképző tanfolyam, Tiszaújváros; 2002. április. 08-26. *Phare Twinning “B” Project continued course, Tiszaújváros, April 8-26, 2002*
  - a. A súlyos balesetek jelentése és kivizsgálása *Reporting and analysis of major accidents*;
  - b. Veszélyes anyagok, létesítmények és üzemek azonosítása, adatszolgáltatás, adatkezelés *Identification of dangerous substances and establishments, data supply, data management*;
  - c. ENSZ EGB Ipari Baleseti Egyezmény és hazai alkalmazása c. előadások *Convention on Industrial Accidents and its application in Hungary*;

„Gyűjtemény a BM OKF ”Phare Twinning B Project továbbképző tanfolyam előadásaihoz” c. BM OKF kiadvány (Budapest, 2003. április) *Collection for the presentations of the continued courses of the Phare Twinning B Project of the NDGDM of the MI.*;
5. ITDH Euro Info Központ Környezetvédelmi Konferenciája *Environment Conference of the ITDH Euro Info Center: ”Az ipari kockázatok jelentősége” Significance of industrial risks*; Budapest; 2003. március. 25.;
6. MAVESZ Vegyipari Konferencia: A súlyos ipari balesetek megelőzéséről szóló jogszabályok végrehajtásával kapcsolatos tapasztalatok és jogszabály módosítási elképzelések, Eger 2004. október 14 *MAVESZ conference for the chemical industry: Experiences related to the implementation of rules regarding the prevention of major industrial accidents, concepts about the modification of the rules.*;
7. A veszélyes hulladékokkal rendelkező veszélyes tevékenységek országhatáron túli hatásai, a védekezés lehetőségei, a vonatkozó nemzetközi szabályok és azok magyarországi hatályosulása *The presentation: “Trans-boundary effects of hazardous activities producing hazardous wastes, possibilities of prevention, relevant international rules and their implementation in Hungary* c. előadás „A veszélyes hulladékokkal kapcsolatos katasztrófavédelmi tevékenységek megalapozásáról” szóló projekt záró-értekezletén *at the closing conference of the project about “Laying the foundation for disaster management activities related to hazardous wastes”* ; Balatonföldvár, 2004. december 09-10. BM OKF, 2004.;
8. „A súlyos ipari balesetek elleni védekezés jogi szabályozása, helyi és területi feladatai” című regionális továbbképzés: A lakosság tájékoztatásával és a nyilvánosság biztosításával kapcsolatos katasztrófavédelmi szabályok alkalmazása, *Legal regulation of the prevention of major industrial accidents, local and regional tasks, regional training: Information to the public and application of disaster management rules related to publicity* Budapest, 2005. október 20., BM OKF és a KKEKI, 2005. és az Interneten: [http://www.katasztrofavedelem.hu/menu/regionalis/reg\\_07/katai.ppt](http://www.katasztrofavedelem.hu/menu/regionalis/reg_07/katai.ppt) .

### **In Russian language**

1. ”Béke és Biztonság Eurorégiók Konferenciája” *Peace and Safety Conference of the Euroregions: Роль Информации Населения в Снижении Последствий Крупных Аварий Связанных с Опасными Веществами (A lakossági tájékoztatás szerepe a súlyos ipari balesetek elhárításában Role of the information to the public in averting major industrial accidents)*; Jaremcse, Ukrajna; 2000. október. 11-13.;
2. Training session on drawing up national implementation reports: Меры по предотвращению промышленных аварий (Ipari baleset-megelőzési intézkedések *Efforts to prevent industrial accidents*), Varsó, 2005. szeptember 12-13.

### Scientifically founded professional guidance and publications

1. Kátai-Urbán L., Popelyák P., Varga I.: Módszertani útmutató a veszélyes anyagokkal kapcsolatos súlyos balesetek elleni védekezés okmányai elkészítésének segítésére, BM OKF belső kiadványa, 2001. *Methodological guidance to promote the preparation of the documents of the prevention of major accidents involving dangerous substances, Internal publication of the NDGDM*;
2. Kátai-Urbán L. (szerk): kézikönyv a veszélyes anyagokkal kapcsolatos súlyos balesetek elleni védekezés hatósági felügyeleti feladatainak ellátásához (Phare Twinning B project) 2003. *Handbook for the supervision tasks of the authority in the prevention of major accidents involving dangerous substances*;
3. Kátai-Urbán L. (szerk.) „Ipari balesetek elleni védekezés Magyarországon”, c. BM OKF kiadvány és CD (szerkesztő), 2004 *Prevention of major accidents in Hungary*.;
4. „Prevention of Major Accidents in Hungary” c. BM OKF kiadvány és CD, 2004.;
5. Kátai-Urbán L. (szerk.) „Módszertani segédlet a veszélyes anyagokkal kapcsolatos súlyos ipari balesetek elleni védekezés területi és helyi feladatainak ellátásához” c. BM OKF lektorált kiadványa, 2005 *Guidance on the implementation of regional and local tasks for the prevention of major accidents involving dangerous substances*;
6. Kátai-Urbán L. (szerk.) “Guidance on the implementation of regional and local tasks for the prevention of major accidents involving dangerous substances” c. BM OKF lektorált kiadványa, 2005.

### Scientifically founded professional concept, plan

1. Szakál B., Kátai-Urbán L., Daróczy I., Kápolna F., Simai M., Kozák K.: Tanulmány a 96/82/ek irányelv hazai jogrendbe való vételének gazdasági-társadalmi hatásairól, Budapest 1999. *Study about the economic and social effects of the integration of the Directive No. 96/82/EC into the law of Hungary*;
2. Szakál B., Kátai-Urbán L., Daróczy I.: Szabályozási elvek és szakmai tervezet a katasztrófák elleni védekezés irányításáról, szervezetéről, és a veszélyes anyagokkal kapcsolatos súlyos balesetek elleni védekezéstről szóló törvény IV. fejezete végrehajtását szolgáló kormányrendeletre 2000. *Regulation principles and technical draft for the government decree serving for the implementation of the act on the control, organization of the prevention of disasters, and the prevention of major accidents involving dangerous substances*;
3. ”Igazgatási koncepció a veszélyes anyagokkal kapcsolatos súlyos balesetek elleni védekezés hatósági engedélyezési-, felügyeleti ellenőrzési és katasztrófavédelmi feladatainak ellátására” BM OKF belső szakmai anyag, 2001. szeptember *Management concept for the fulfillment of the licensing, supervision control and disaster management tasks of the authorities in the prevention of major accidents involving dangerous substances*.

### Other scientific works

1. Kátai-Urbán L.: A katasztrófa-elhárítás nemzetközi vonatkozásai, szakdolgozat (BKE) 1999. *International relevance of the prevention of disasters*;
2. Kátai-Urbán L.: A súlyos ipari baleseti szabályozás felülvizsgálata, szakdolgozat (ELTE ÁJK) 2004 *Review of the regulation of major industrial accidents*

## **Curriculum Vitae (Professional-Scientific)**

**Name:** dr. Kátai-Urbán Lajos civil protection lieutenant-colonel, civil protection counselor

**Place and date of birth:** Budapest, June 12, 1969

### **Course of studies:**

- 1987-1990**      **Fortification-camouflage (civil) engineer.** Military Technical University of Kaliningrad, Soviet Union (studies not completed).
- 1990-1991**      **Military construction engineer.** Kossuth Lajos Military College, Department of Technical Sciences (diploma of merit).
- 1997-1999**      **International Economic Expert.** University of Economics Budapest, Postgraduate Education Institute of Economics, Faculty of International Economic and Business Relationships.
- 1999-2005**      **Lawyer.** ELTE Department of Political Sciences and Jurisprudence
- 2005-**            **Ph. D. student at individual course.** Zrínyi Miklós University of Defense, Military Technical Doctor School

### **Professional career:**

- 1991 – 1996**      **Captain, operation chief officer.** (Budapest).
- 1996 – 1997**      **Technical chief referent, branch office manager,** Civil Protection Headquarters of the MI, Pest County.
- 1997 – 1998**      **Senior chief referent,** National Civil Protection Headquarters of the MI, Euroatlantic Integration and International Relations Bureau.
- 1998 – 2000**      **Deputy Head of Department,** National Civil Protection Headquarters of the MI (PVOP), National Industrial Accidents Center of the MI (PVOP), National Industrial Accidents Center of the MI.
- 2000 – 2004**      **Senior Chief Referent,** National Directorate General for Disaster Management, Department for Prevention and Supervision of Industrial Accidents (IBFF)
- As of 2004.**        **Deputy Head of Department.** NDGDM of the MI, IBFF

### **Expert, science organization activities (membership)**

- 1998-99.**            1. Free movements of goods, member of the European Integration Interministerial Committee (EITB) (representative of the MI)
- As of 1998 continuously**      Member of the 22<sup>nd</sup> environment protection, EITB, as of 2004 member of the 30<sup>th</sup> Environment Protection, European Coordination Interministerial Committee (Representative of the MI)
- As of 1999 continuously**      Hungarian representative of the Competent Authorities being in charge of the introduction of the SEVESO II. Directive.
- 2000 - 2004**        Member of the Execution Work Group, Convention of the UN ECE on the Transboundary Effects of Industrial Accidents (Industrial Accident Convention)
- 2000 – 2001.**        The Phare Twinning Project (98/IB/EN-01-SP 5) supporting the

	harmonization of the Council Directive of the EC, Project coordinator.
<b>2002 - 2003.</b>	The Phare Twinning B Project supporting the implementation of the SEVESO II. Directive (HU 2001/IB/EN-03). Project coordinator.
<b>2003 - 2004</b>	Member of the Steering Group of the ARAMIS EU Research Project about the harmonization of the danger assessment procedures of the Seveso II. Directive
<b>As of 2003 continuously</b>	Member of the Joint Working Group of the Industrial Accident and Water Convention
<b>As of 2004 continuously</b>	Vice President of the Bureau of the Industrial Accident Convention
<b>As of 2003</b>	Member of the Joint Committee of the Hungarian-Romanian Environment Convention, representative of the Ministry of the Interior
<b>As of 2004 continuously</b>	Member of the Joint Committee of the Hungarian-Slovakian Environment Convention, representative of the Ministry of the Interior
<b>As of 2005 continuously</b>	Member of the Expert Committee „for the Identification, Examination, Analysis and Presentation of Problems Arising in Connection with the Establishment of Facilities and Activities with Potential Trans-Boundary Effects, with Special Emphasis on the Rosia Montana (Verespatak) Project.”
<b>As of 2005 continuously</b>	Hungarian Association of Military Sciences, Department of Civil Protection  Hungarian Association of Police Sciences, Department of Disaster Management

**Research activities** (publication data):

- Newspaper articles: 23 pieces.; books, book chapters: 4 pieces; notes, handbooks, study aids: 2 pieces.
- Presentations published in conference papers: in English language: 13; in Hungarian language: 8 pieces.; in Russian language: 2 pieces.
- Scientifically founded professional aids and publications: 6 pieces.; professional concepts, plans: 3 pieces

**Language skills:**

<b>2005</b>	High level proficiency examination, type “B”, written examination High level proficiency examination, type “A”, verbal exam
<b>1990</b>	High level proficiency examination, type “C”

Budapest, June 5, 2006

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