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MEETING OF THE SIGNATORIES TO
THE CONVENTION ON THE TRANSBOUNDARY
EFFECTS OF INDUSTRIAL ACCIDENTS

CEP/WG.4/SEM.1/1999/3
MP.WAT/SEM.1/1999/3

MEETING OF THE PARTIES TO THE CONVENTION
ON THE PROTECTION AND USE OF TRANSBOUNDARY
WATERCOURSES AND INTERNATIONAL LAKES

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**SEMINAR ON THE PREVENTION OF CHEMICAL ACCIDENTS
AND LIMITATION OF THEIR IMPACT ON TRANSBOUNDARY WATERS**
(Hamburg, Germany, 4-6 October 1999)

REPORT OF THE SEMINAR *

*/ Prepared pursuant to the decisions of the Signatories to the Convention on the Transboundary Effects of Industrial Accidents at their seventh meeting (CEP/WG.4/1998/2, para. 31) and the Working Group on Water Management at its first meeting (MP.WAT/WG.1/1998/2).

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Introduction

1. The Seminar on the Prevention of Chemical Accidents and Limitation of their Impact on Transboundary Waters was held in Hamburg (Germany) from 4 to 6 October 1999 at the invitation of the Government of Germany. It was a follow-up to the workshop on the same subject held in Berlin in May 1998.

2. The Seminar was attended by experts from Albania, Armenia, Austria, Bulgaria, Croatia, Czech Republic, Finland, Germany, Hungary, Kazakhstan, Netherlands, Poland, Republic of Moldova, Russian Federation, Slovakia, Switzerland, the former Yugoslav Republic of Macedonia, Ukraine and Uzbekistan. A representative of the European Commission also participated.

3. The representatives of the International Commission for the Protection of the River Rhine and the International Commission for the Protection of the River Elbe participated in the Seminar.

I. OBJECTIVE

4. The main objective of the Seminar was to develop a long-term programme for the implementation of the provisions common to both the Convention on the Transboundary Effects of Industrial Accidents and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, and to draw up guidelines/recommendations containing technical requirements for improving the safety of industrial installations so as to prevent transboundary accidental water pollution, taking into account the achievements of the International Commissions for the Protection of the Rhine and the Elbe.

II. OPENING OF THE SEMINAR

5. During the opening session Ms. Simone Probst, State Secretary of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, and Mr. Alexander Porschke, State Minister of the Environment of the Federal State Government of Hamburg, addressed the Seminar. Mr. Lars Nordberg, Deputy Director, Environment and Human Settlements Division of ECE, also addressed the Seminar.

6. The Seminar's participants adopted its agenda as contained in document CEP/WG.4/SEM.1/1999/2 - MP.WAT/SEM.1/1999/2.

III. CONSIDERATION OF THE TOPICS OF THE SEMINAR

7. To facilitate the discussion, government rapporteurs from Germany, Hungary and Switzerland had prepared introductory reports for the three topics of the Seminar: prevention technologies; international alarm systems, including international aspects of contingency planning; methodologies for identifying hazardous activities. The reports were based on 18 discussion papers submitted by Governments (annex II). The discussion on each seminar topic was introduced by one of the rapporteurs.

8. During the discussion, the following issues were addressed, inter alia, technologies to prevent accidental transboundary water pollution, including safety measures and technical requirements to prevent water pollution caused by industrial accidents; international early-warning and alarm systems, including networks of points of contact to respond promptly and effectively so as to mitigate the consequences of transboundary water pollution; notification procedures and mutual assistance in the event of an industrial accident causing transboundary water pollution; methodologies for identifying hazardous activities along transboundary rivers; the facilitation of safety technology exchange and technological advances.

9. The Seminar adopted conclusions and recommendations for a long-term work programme (annex I). The Seminar's participants agreed that "long-term" meant a period of five years for market-economy countries and ten years for countries with economies in transition in order to implement the programme comprehensively, including the adaptation of national legal systems, the setting-up of administrative procedures and the implementation of technical measures at the level of industrial installations and production practices.

10. The Seminar also adopted recommendations for short-term implementation to promote transboundary cooperation and prompt communication in the event of an accident.

IV. OTHER BUSINESS

11. On 5 October 1999, a technical visit was organized to the hazardous installations in the harbour of the city of Hamburg. On 6 October 1999, a visit to the new, computerized alert centre of the Hamburg fire brigade took place.

12. The Seminar expressed its gratitude to the Government of Germany for the excellent organization and the financial support given to the participants from countries in transition.

Annex I

CONCLUSIONS AND RECOMMENDATIONS

1. Both Conventions deal with the same general aim: to improve safety and avoid the transfer of accidental pollution. Much experience has been gained under both Conventions and a wealth of material and working documents reflecting achievements is available. The Seminar noted that national legislation should impose direct responsibility for water pollution on the polluter, and that the State authorities should have enough law enforcement capacity.
2. The Seminar also noted that exploration, exploitation and the transport of oil as well as tailing dams have the potential of causing severe impact on transboundary waters in the case of an accident. Therefore, in future, activities should be undertaken to examine these hazards and possible safety measures to protect transboundary waters.
3. In the light of the above considerations and to facilitate the broad use of achievements, a long-term work programme has been drawn up.
4. The Seminar recommended to the Conference of the Parties to the Convention on the Transboundary Effects of Industrial Accidents and the meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes that the joint ad hoc expert group on water and industrial accidents should:
 - (a) Support the implementation of, and further develop, the long-term work programme (see section I);
 - (b) Carry out, or provide guidance on the implementation of, the measures proposed in section II as short-term activities to promote cooperation and communication in the event of an industrial accident.

I. LONG-TERM WORK PROGRAMME

Waste waters

5. Firstly, the Parties to both Conventions should ensure that in the next five to ten years the operators of hazardous activities in the catchment area of transboundary water bodies implement the following measures to prevent accidentally contaminated waste water finding its way - directly or indirectly - into waters:
 - (a) Identify at an early stage the accidentally contaminated waste water streams (any continuous or discontinuous waste water such as waste water from production installations, ancillary installations and laboratories as well as cooling and rain water) by means of monitoring chemical (e.g. substance concentration, pH values), physical (e.g. temperature, conductivity) and

biological (e.g. toxicity) parameters on the water streams, taking into account the substances that can be released;

(b) Retain the accidentally contaminated waste-water streams as close as possible to the source and if necessary segregate the waste-water drains;

(c) Put in place suitable retention facilities of an adequate size for accidentally contaminated waste-water streams;

(d) Take measures to prevent water contamination in the event of an accidental reduction in the purification capacity of the treatment plant (e.g. retention facilities, re-circulation of waste water);

(e) Take steps to ensure that substances which constitute a fire or explosion risk cannot find their way into the waste-water system, unless the system is already protected against such dangers;

(f) Avoid open cooling-water systems.

Fire protection

6. Secondly, the Parties to both Conventions should ensure that in the next five to ten years the operators of hazardous activities in the catchment area of transboundary water bodies implement the following measures to prevent fire-fighting water finding its way - directly or indirectly - into waters:

(a) Take measures to prevent the occurrence of a fire by means of, for example, construction measures, fire detection, administrative measures such as storage facility rules (e.g. joint storage), plans for fire prevention, training of personnel;

(b) Take measures to keep any fire as small as possible (mobile and stationary fire-fighting equipment, availability of suitable agents for extinguishing fires in sufficient quantities and a well-trained and equipped fire service familiar with special situations);

(c) Install facilities for the retention of fire-fighting water, the size of which should take into account the following parameters: hazard and quantity of the substances (especially hazard to water); area of storage; nature of storage facility (e.g. open-air, indoors, height of goods stored); fire-protection infrastructure (fire-detection system, fire-extinguishing system); readiness of fire brigade.

Trans-shipment

7. Thirdly, the Parties to both Conventions should ensure that in the next five to ten years the operators of hazardous activities in the catchment area of transboundary water bodies implement the following measures to prevent substances hazardous to water accidentally finding their way - directly or indirectly - into waters:

(a) Install automatic safety systems that shut off the substance stream in the event of an accident;

(b) Install collecting facilities at trans-shipment sites capable of accommodating the volumes of liquid that can escape before suitable measures or automatic safety systems take effect;

(c) Ensure that contaminated fire-fighting water resulting from an accident does not enter waters directly (it must be subject to suitable treatment). Equipment suitable for immediate use must be kept at trans-shipment sites to prevent the spread of substances (make sure that equipment for removing the substances is also available);

(d) Avoid trans-shipment of substances in the riparian zone of a waterway, especially in the case of new installations.

Flood areas

8. Fourthly, the Parties to both Conventions should ensure that in the next five to ten years the operators of hazardous activities in the catchment area of transboundary water bodies ensure that containers and parts of installations with large quantities of substances hazardous to water are protected against buoyancy, avulsion and damage from floating material.

Siting

9. Fifthly, the Parties to both Conventions should take measures regarding the most rational siting of hazardous installations, taking into account exposure to natural risk factors (e.g. land slides, avalanches, floods).

II. SHORT-TERM ACTION TO PROMOTE COOPERATION AND PROMPT COMMUNICATION IN THE EVENT OF AN INDUSTRIAL ACCIDENT

Alarm criteria

10. It was not deemed appropriate to develop specific, harmonized criteria for raising the alarm given the different conditions in the catchment areas of international water bodies. However, it is recommended that UN/ECE countries should agree upon a set of more generic criteria for triggering alarm systems. These could include the nature and quantity of hazardous substances released, the distance to water bodies, the water level and the flow speed.

Information criteria

11. In cases of major emissions of hazardous substances that do nevertheless not fulfil the criteria for raising the alarm, a rapid exchange of information should take place at local level between the responsible authorities, if a release of more than 5% of the relevant threshold quantities given in annex I to the Industrial Accidents Convention occurs.

Information exchange

12. Industrial accident notification systems should be used not only upstream/downstream to counteract immediately the transboundary effects of an industrial accident but also in general, i.e. to ensure an exchange of information and experience so that lessons can be learned from accidents.

Notification procedure

13. Taking into account the different alarm and notification systems of the International Commissions for the Protection of the Rivers Rhine, Elbe and Danube and the content of the notification form developed under the Industrial Accidents Convention, clear notification procedures should be established at the regional and local levels.

Methods of identification

14. As a first step, the hazardous activities sited in the catchment areas of transboundary watercourses should be identified according to the threshold quantities of the Industrial Accident Convention.

15. As a second step, near-border facilities with smaller amounts of hazardous substances should also be taken into account.

Impact studies

16. To facilitate the joint identification of hazardous activities, the Parties to both Conventions should conduct impact studies on the release of water-polluting hazardous substances. To evaluate the impact of a release of such substances into groundwaters and surface waters, suitable computation models should be specified. This will help ensure the most reliable forecast of the propagation situation in the event of an accident.

17. Furthermore, standardized evaluation criteria should be laid down for accident-related pollution levels. The impact on human health and safety and on the environment should be taken into account. The appropriate alarm thresholds must be derived from the evaluation criteria.

18. The results of the planned international pilot project „Development of alarm criteria for international alert systems using monitoring data and risk assessment“ by the Czech Republic, Germany and the Netherlands and other projects should be taken into account.

Common procedures

19. The Parties to both Conventions should establish standardized procedures for identifying hazardous industrial activities on the basis of transboundary cooperation between riparian countries and their joint bodies (e. g. international river commissions) by using, as appropriate, existing procedures and experience.

Annex II

LIST OF DOCUMENTS

CEP/WG.4/SEM.1/1999/1 MP.WAT/SEM.1/1999/1	Programme of the Seminar First announcement and call for discussion papers	E/F/R
CEP/WG.4/SEM.1/1999/2 MP.WAT/SEM.1/1999/2	Programme of the Seminar Note by the secretariat	E/F/R
CEP/WG.4/SEM.1/1999/3 MP.WAT/SEM.1/1999/3	Report of the Seminar	E/F/R
CEP/WG.4/SEM.1/1999/4 MP.WAT/SEM.1/1999/4	Topic A - Prevention technologies. Introductory report prepared by Mr. M. Schiess, Hungary	E
CEP/WG.4/SEM.1/1999/5 MP.WAT/SEM.1/1999/5	Topic B - International alarm systems, including international aspects of contingency planning. Introductory report prepared by Mr. S. Kisgyorgy, Hungary	E
CEP/WG.4/SEM.1/1999/6 MP.WAT/SEM.1/1999/6	Topic C - Methods for identification of hazardous industrial activities. Introductory report prepared by Mr. K. Dietrich Paul, Germany	E
CEP/WG.4/SEM.1/1999/7 MP.WAT/SEM.1/1999/7	Activity of the Republic of Armenia in the prevention of chemical accidents and limitation of their impact on transboundary waters (prepared by Mr. A. Aleksandryan, Armenia)	E
CEP/WG.4/SEM.1/1999/8 MP.WAT/SEM.1/1999/8	Assessment of the impact of industrial accidents on the environment in Kazakhstan (prepared by Mr. A. Lychev and Mrs. M. Zhunusova, Kazakhstan)	E
CEP/WG.4/SEM.1/1999/9 MP.WAT/SEM.1/1999/9	Warning alarm system and risk assessment procedure of potential sources of pollution to transboundary water in Moldova (prepared by Mr. S. Galitchii, Republic of Moldova)	E
CEP/WG.4/SEM.1/1999/10 MP.WAT/SEM.1/1999/10	Risk assessment (prepared by Mr. J. Van Steenwijk, Netherlands)	E

CEP/WG.4/SEM.1/1999/11 MP.WAT/SEM.1/1999/11	The water use licensing system-the most important means of preventing and mitigating accidental pollution of water bodies (prepared by Mr. G.M. Ostrovsky, Russian Federation)	E
CEP/WG.4/SEM.1/1999/12 MP.WAT/SEM.1/1999/12	Efforts and achievements for the prevention of chemical accidents with transboundary impacts, for the limitation and mitigating transboundary effects of the accidental pollution from chemical industry (prepared by Mrs. R. Scarlat, Romania)	E
CEP/WG.4/SEM.1/1999/13 MP.WAT/SEM.1/1999/13	Preparation of pollution sources' inventories under the pilot project programmes in Hungary (prepared by Mrs. Z. Steindl, Hungary)	E
CEP/WG.4/SEM.1/1999/14 MP.WAT/SEM.1/1999/14	Danube accidental emergency warning system (Danube AEWS) and the present practice in Hungary in the minimisation of the transboundary effects of water pollution (prepared by Mr. P. Kovács, Hungary)	E
CEP/WG.4/SEM.1/1999/15 MP.WAT/SEM.1/1999/15	Action by the Republic of Moldova to prevent industrial accidents and limit their impact on transboundary waters (prepared by Messrs. V.P. Ropot and I. Apostol, Republic of Moldova)	E
CEP/WG.4/SEM.1/1999/16 MP.WAT/SEM.1/1999/16	The multinational Caspian Sea on the threshold of a disaster as a result of industrial accidents (prepared by Messrs. D.M. Ismailov and F. Sh. Aliev, Azerbaijan)	E
CEP/WG.4/SEM.1/1999/17 MP.WAT/SEM.1/1999/17	Industrial accidents along the international River Kura-Fraught with consequences for the population of Azerbaijan (prepared by Mr. D.M. Ismailov, Azerbaijan)	E
CEP/WG.4/SEM.1/1999/18 MP.WAT/SEM.1/1999/18	Recommendations on industrial accidents prevention and installation safety (prepared by IKSE and IKSR)	E
CEP/WG.4/SEM.1/1999/19 MP.WAT/SEM.1/1999/19	Experience with the application of the International Emergency Warning System for the Elbe (IWA Elbe) (prepared by Mr. Z. Kunst, Czech Republic)	E

CEP/WG.4/SEM.1/1999/20 MP.WAT/SEM.1/1999/20	Activities of the Russian authorities in preparing for the implementation of, and implementing, the Convention on the Transboundary Effects of Industrial Accidents and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Prepared by Mr. N.B. Nefedev, Russian Federation)	E
CEP/WG.4/SEM.1/1999/21 MP.WAT/SEM.1/1999/21	Assessment of the risk to transboundary waters from Hazardous Activities (prepared by Mr. R. Karimov, Uzbekistan)	E
CEP/WG.4/SEM.1/1999/22 MP.WAT/SEM.1/1999/22	International warning and alert plan for the Elbe (prepared by the International Commission for the Protection of the Elbe)	E
CEP/WG.4/SEM.1/1999/23 EMP.WAT/SEM.1/1999/23	Contribution of the Former Yugoslav Republic of Macedonia (Prepared by Mrs. Stanislava Dodeva, the former Yugoslav Republic of Macedonia)	
CEP/WG.4/SEM.1/1999/24 MP.WAT/SEM.1/1999/24	AQUABEL A report and alarm system (prepared by Messrs. P. Huijser and A. Dijkstra, Netherlands)	E
CEP/WG.4/SEM.1/1999/25 MP.WAT/SEM.1/1999/25	Approach of risks to the aquatic environment in the Netherlands (prepared by Messrs. G.J. Stam, P.H. Bottelberghs and J.G. Post, Netherlands)	E
CEP/WG.4/SEM.1/1999/26 MP.WAT/SEM.1/1999/26	The multinational Adriatic Sea threatened by chemical accidents originated in Albania (prepared by Messrs. Y. Muceku, P. Kristafilaku and N. Gjerazi, Albania)	E

In addition the following papers were submitted and distributed during the seminar:

Incidental and accidental water pollution in the Republic of Croatia (Prepared by Mr. Valburga Kanazir and Mrs. Nena Hak, Croatia)	E
Monitoring and potential pollution Sources' Inventories in the Bulgarian part of the Danube Catchment Area (prepared by Mr. Plamen Ninov, Bulgaria)	E