



**Economic and  
Social  
Council**

Distr.  
GENERAL

MP.WAT/2001/1/Add.1  
CP.TEIA/2001/1/Add.1

Original: ENGLISH  
30 March 2001

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**ECONOMIC COMMISSION FOR EUROPE**

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

**CONFERENCE OF THE PARTIES TO THE  
CONVENTION ON THE TRANSBOUNDARY  
EFFECTS OF INDUSTRIAL ACCIDENTS**

Joint special session  
Geneva, 2-3 July 2001

**RESPONSIBILITY AND LIABILITY  
IN RELATION TO ACCIDENTAL WATER POLLUTION**

Submitted by the Chairperson of the Working Group on Legal and Administrative Aspects,  
established by the Meeting of the Parties to the Convention on the Protection and Use of  
Transboundary Watercourses and International Lakes

**Addendum \*/**

**MATTERS UNDER CONSIDERATION BY THE EXPERT GROUP**

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\*/ This document has not been formally edited.

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## **Introduction**

1. Paragraph 28 of report on responsibility and liability in relation to accidental water pollution (MP.WAT/2001/1 – CP.TEIA/2001/1) states “Assuming that the drawing-up of a binding or non-binding instrument (see options four and five above) would add value, the expert group was of the opinion that such an instrument should at least include provisions on the following: scope of application; definitions; attribution of liability and exemptions; enforcement of liability; insurance and financial guarantees; compensation fund.” The expert group, therefore, compiled examples of solutions found in legally binding and non-binding international instruments. This compilation appears as annex I to the above report. For technical reasons this annex is issued separately.

2. The following abbreviations were used:

**Aarhus Convention:**

CONVENTION ON ACCESS TO INFORMATION, PUBLIC PARTICIPATION IN DECISION-MAKING AND ACCESS TO JUSTICE IN ENVIRONMENTAL MATTERS. Done at Aarhus (Denmark) on 25 June 1998. Not in force.

**Basel Protocol:**

PROTOCOL ON LIABILITY AND COMPENSATION FOR DAMAGE RESULTING FROM TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL. Done at Basel on 10 December 1999. Not in force.

**CLC Convention:**

INTERNATIONAL CONVENTION ON CIVIL LIABILITY FOR OIL POLLUTION DAMAGE (CLC). Done at Brussels on 29 November 1969. In force since 1975, amended by the Protocols of 1976 and 1992 (in force).

**CRAMRA:**

CONVENTION ON THE REGULATION OF ANTARCTIC MINERAL RESOURCE ACTIVITIES. Done at Wellington 2 June 1988. Not in force

CRTD Convention:

CONVENTION ON CIVIL LIABILITY FOR DAMAGE CAUSED DURING CARRIAGE OF DANGEROUS GOODS BY ROAD, RAIL AND INLAND NAVIGATION VESSELS (CRTD). Done at Geneva on 10 October 1989. Not in force.

Environmental Impact Assessment Convention:

CONVENTION ON ENVIRONMENTAL IMPACT ASSESSMENT IN A TRANSBOUNDARY CONTEXT. Done at Espoo (Finland) on 25 February 1991. In force since 1997.

HNS Convention:

INTERNATIONAL CONVENTION ON LIABILITY AND COMPENSATION FOR DAMAGE IN CONNECTION WITH THE CARRIAGE OF HAZARDOUS AND NOXIOUS SUBSTANCES BY SEA (HNS). Done in London on 3 May 1996. Not in force

Industrial Accidents Convention:

CONVENTION ON THE TRANSBOUNDARY EFFECTS OF INDUSTRIAL ACCIDENTS. Done at Helsinki on 17 March 1992. In force since 2000.

Lugano Convention:

CONVENTION ON CIVIL LIABILITY FOR DAMAGE RESULTING FROM ACTIVITIES DANGEROUS TO THE ENVIRONMENT. Done at Lugano on 21 June 1993. Not in force.

Paris Convention:

CONVENTION ON THIRD PARTY LIABILITY IN THE FIELD OF NUCLEAR ENERGY. Done in Paris on 29 July 1960. In force since 1968

Water Convention:

CONVENTION ON THE PROTECTION AND USE OF TRANSBOUNDARY WATERCOURSES AND INTERNATIONAL LAKES. Done at Helsinki on 17 March 1992. In force since 1996.

Vienna Convention:

VIENNA CONVENTION ON CIVIL LIABILITY FOR NUCLEAR DAMAGE. Done in Vienna on 21 May 1963. In force since 1977.

## I. SCOPE OF APPLICATION 1/

### A. Forms of water pollution

#### 1. Transboundary – [non transboundary] 2/

3. Transboundary effects means serious effects within the jurisdiction of a Party as a result of an industrial accident occurring within the jurisdiction of another Party (Industrial Accidents Convention, art. 1 (d)).

#### 2. Accidental – chronic 3/

4. No examples found in Convention texts.

### B. Causes of water pollution

#### 1. Industrial 4/, non industrial (e.g. agricultural), due to natural disasters 5/, 6/ due to human activities, biological

5. Industrial accident means an event resulting from an uncontrolled development in the course of any activity involving hazardous substances either: (i) in an installation, for example during manufacture, use, storage, handling or disposal; or (ii) during transportation in so far as it is covered by paragraph 2 (d) of article 2 (Industrial Accidents Convention, art. 1 (a)).

#### 2. From hazardous activities defined in Annex I to the Industrial Accidents Convention, from other activities as well (e.g. pipelines, tailing dams)

6. Hazardous activity means any activity in which one or more hazardous substances are present or may be present in quantities at or in excess of the threshold quantities listed in Annex I hereto, and which is capable of causing transboundary effects (Industrial Accidents Convention, art. 1 (b)).

3. From other activities

7. No examples found in Convention texts.

**C. Impact**

1. [Any] [transboundary] impact through water

8. Any impact, not exclusively of a global nature, within an area under the jurisdiction of a Party caused by a proposed activity, the physical origin of which is situated wholly or in part within the area under the jurisdiction of another party (Environmental Impact Assessment Convention, art. 1 (viii)).

2. [Transboundary] impact transmitted through water on persons (life, personal injury, health), property (loss or damage) and the environment in general

9. (a) Any significant adverse effect on the environment resulting from a change in the conditions of transboundary waters caused by a human activity, the physical origin of which is situated wholly or in part within an area under the jurisdiction of a Party, within an area under the jurisdiction of another Party. Such effects on the environment include effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; they also include effects on the cultural heritage or socio-economic conditions resulting from alterations to those factors (Water Convention, art. 1 (2));

(b) Any effect caused by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to these factors (Environmental Impact Assessment Convention, art. 1 (vii)).

3. [Transboundary] impact through water on persons (life, personal injury, health), property (loss or damage) and on specific environmental elements (components) 7/

10. No examples found in Convention texts.

## II. DEFINITIONS

### A. Transboundary -[non-transboundary] water pollution 8/

11. No examples found in Convention texts.

### B. Accidental pollution 9/

12. No examples found in Convention texts.

### C. Chronic pollution

13. No examples found in Convention texts.

### D. Natural disaster 10/

14. No examples found in Convention texts.

### E. Industrial pollution 11/

15. No examples found in Convention texts.

### F. Non-industrial pollution 12/

16. No examples found in Convention texts.

### G. Hazardous activity, dangerous activity

17. (a) Hazardous activity means any activity in which one or more hazardous substances one or more hazardous substances are present or may be present in quantities at or in excess of the threshold quantities listed in Annex I hereto, and which is capable of causing transboundary effects (Industrial Accidents Convention, art. 1 (b));

(b) Dangerous activity means one or more of the following activities provided that it is performed professionally, including activities conducted by public authorities: (i) the production, handling, storage use of discharge of one or more dangerous substances or

any operation of a similar nature dealing with such substances; (ii) the production, culturing, handling, storage, use, destruction, disposal, release or any other operation dealing with one or more: genetically modified organisms which as a result of the properties of the organism, the genetic modification and the conditions under which the operation is exercised, pose a significant risk for man, the environment or property; micro-organisms which as a result of their properties and the conditions under which the operation is exercised pose a significant risk for man, the environment or property, such as those micro-organisms which are pathogenic or which produce toxins; (iii) the operation of an installation or site for the incineration, treatment, handling or recycling of waste, such as those installations or sites specified in Annex II, provided that the quantities involved pose a significant risk for man, the environment or property; (iv) the operation of a site for the permanent deposit of waste (Lugano Convention, art. 2 (1)).

#### **H. Transboundary impact, impact**

18. (a) Transboundary impact means any significant adverse effect on the environment resulting from a change in the conditions of transboundary waters caused by a human activity, the physical origin of which is situated wholly or in part within an area under the jurisdiction of a Party, within an area under the jurisdiction of another Party. Such effect on the environment includes effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; they also include effects on the cultural heritage or socio-economic conditions resulting from alterations to these factors (Water Convention, art. 1 (1));

(b) Impact means any effect caused by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors (Environmental Impact Assessment Convention, art. 1 (viii));

(c) Transboundary impact means any impact, not exclusively of a global nature, within an area under the jurisdiction of a Party caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another Party (Environmental Impact Assessment Convention, art. 1 (viii)).

## **I. Environment**

19. (a) Elements of the environment, such as air and atmosphere, water, soil, land, landscape and natural sites, biological diversity and its components, including genetically modified organisms, and the interaction among these elements (Aarhus Convention, art. 2 (3));

(b) Living or non-living components of that environment or those ecosystems, including harm to atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to this Convention (CRAMRA, art. 1 (15));

(c) Impact means any effect caused by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors (Environmental Impact Assessment Convention, art. 1 (vii)).

20. Environment includes: natural resources both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors; property which forms part of the cultural heritage; and the characteristic aspects of the landscape (Lugano Convention, art. 10).

21. Effects on the environment include effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; they also include effects on the cultural heritage or socio-economic conditions resulting from alterations to those factors (Water Convention, art. 1 (2)).

## **J. Damage**

22. The term is defined in various legal instruments as follows (It will be observed that in most cases it absorbs also the term «compensation»):

(a) Damage means (i) Loss of life or personal injury; (ii) loss of or damage to property other than to the installation itself or property held under the control of the

operator, at the site of the dangerous activity; (iii) loss or damage by impairment of the environment, provided that compensation for impairment of the environment, other than for loss of profit from such impairment, shall be limited to the costs of measures of reinstatement actually undertaken or to be undertaken (Lugano Convention 1993, art. 2 (7));

(b) Damage means (i) Loss of life or personal injury; (ii) Loss of or damage to property other than property held by the person liable in accordance with the present Protocol; (iii) Loss of income directly deriving from an economic interest in any use of the environment, incurred as a result of impairment of the environment, taking into account savings and costs; (iv) The costs of measures of reinstatement of the impaired environment, limited to the costs of measures actually taken or to be undertaken; (v) The costs of preventive measures, including any loss or damage caused by such measures, to the extent that the damage arises out of or results from hazardous properties of the wastes involved in the transboundary movement and disposal of hazardous wastes and other wastes subject to the Convention (Basel Protocol, art. 2 (c));

(c) Damage means (i) loss of life or personal injury on board or outside the vehicle carrying the dangerous goods caused by those goods; (ii) loss of or damage to property outside the vehicle carrying the dangerous goods caused by those goods, to the exclusion of any loss of or damage to other vehicles in the same train of vehicles or any loss of or damage to property on board such vehicles (iii) loss or damage by contamination to the environment caused by dangerous goods, provided that compensation for impairment of the environment other than for loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken (CRTD Convention, art. 1 (1));

(d) Damage means (i) loss of life or personal injury on board or outside the ship carrying the hazardous and noxious substances caused by those substances; (ii) loss of or damage to property outside the ship carrying the hazardous and noxious substances caused by those substances; (iii) loss or damage by contamination of the environment caused by hazardous and noxious substances, provided compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken (HNS Convention, art. 1 (6));

(e) Pollution damage means: (i) loss or damage caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually taken or to be undertaken (CLC Convention, art. 1 (6));

(f) Pollution damage means loss or damage outside the installation caused by contamination resulting from the escape or discharge of oil from the installation and includes the costs of preventive measures and further loss or damage outside the installation caused by preventive measures (CONVENTION ON CIVIL LIABILITY FOR OIL POLLUTION DAMAGE RESULTING FROM EXPLORATION FOR AND EXPLOITATION OF SEABED MINERAL RESOURCES, art. 1 (6));

(g) Damage... means any impact on the living or non-living components of that environment or those ecosystems, including harm to atmospheric, marine or terrestrial life beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to this Convention (CRAMRA, art. 1 (15)).

23. As regards the question of the threshold, if mentioned at all, the qualification usually applicable is that damage should not be «insignificant» (Vienna Convention, art. 1 (k), CONVENTION ON SUPPLEMENTARY COMPENSATION FOR NUCLEAR DAMAGE, art. 1 (f)), «negligible» (CRAMRA, art. 1 (15)) or «at tolerable levels» (Lugano Convention, art. 8).

**K. Compensation (reinstatement, costs of loss or damage, loss of profit, preventive measures 13/)**

24. As already observed above under «damage», the term «compensation» is usually interchangeable with «damage» and appears as «costs». Reference to such costs is made as follows:

(a) The costs of measures of reinstatement of the impaired environment, limited to the costs of measures actually taken or to be undertaken (Basel Protocol, art. 2 (2)(iv));

(b) Nuclear damage means...(iv) the costs of measures of reinstatement of impaired environment, unless such impairment is insignificant, if such measures are actually taken or to be taken... (Vienna Convention, art. 1 (k) and CONVENTION ON SUPPLEMENTARY COMPENSATION FOR NUCLEAR DAMAGE, art. 1 (f)).

25. See also art. 1 (6) of the CLC Convention, above, in fine, art. 2 (7) of the Lugano Convention, above, in fine, HNS Convention, art. 1 (6) above, in fine, CONVENTION ON CIVIL LIABILITY FOR OIL POLLUTION DAMAGE RESULTING FROM EXPLORATION FOR AND EXPLOITATION OF SEABED MINERAL RESOURCES, art. 1 (6) above, in fine, CRTD Convention, art. 1 (10), above, in fine.

#### **L. Operator 14/**

26. The following definitions are given to the above term in various Conventions:

(a) Operator means the person who exercises the control of a dangerous activity (Lugano Convention, art. 2 (5));

(b) Operator means any natural or legal person, including public authorities, in charge of an activity, e.g. supervising, planning to carry out or carrying out an activity (Industrial Accidents Convention, art. 1 (e));

(c) Operator means (i) a Party or (ii) an agency or instrumentality of a Party; or (iii) a juridical person established under the law of a Party; or (iv) a joint venture consisting exclusively of any combination of any of the foregoing, which is undertaking Antarctic mineral resource activities and for which there is a Sponsoring State (CRAMRA, art. 1 (11));

(d) Operator means the person, whether licensee or not, designated as operator for the purposes of this Convention by the Controlling State, or, in the absence of such designation, the person who is in overall control of the activities carried on at the installation (CONVENTION ON CIVIL LIABILITY FOR OIL POLLUTION DAMAGE RESULTING FROM EXPLORATION FOR AND EXPLOITATION OF SEABED MINERAL RESOURCES, art. 1 (3));

(e) Operator in relation to a nuclear installation means the person designated or recognised by the competent public authority as the operator of that installation (Paris Convention, art. 1 (a) (vi));

(f) Operator, in relation to a nuclear installation, means the person designated or recognised by the Installation State as the operator of that installation (Vienna Convention, art. 1 (1) (c)).

### **III. ATTRIBUTION OF LIABILITY AND EXEMPTIONS**

#### **A. Attribution**

##### **1. Attribution to States**

27. (a) Attribution to States where the activity is undertaken by the State itself or the State did not exercise due diligence in controlling the operators through the enactment or application of appropriate legislation, the insurance of permits, taking appropriate measures, etc.;

(b) Attribution to States, but only for subsidiary liability.

##### **2. Attribution to operators (companies, private persons)**

28. (a) Lugano Convention, art. 6 (1), 6 (4);

(b) CRTD Convention, art. 5 (1) (2) and 6 (1);

(c) Vienna Convention, art. II (1).

##### **3. Attributed to Owner**

29. (a) CLC Convention, art. II (1) (3);

(b) HNS Convention, art. 7 (1).

4. Jointly and severally to the above (between operators)

30. (a) Lugano Convention, art. 6 (2);  
(b) CRTD Convention (if more carriers);  
(c) CLC Convention (if more owners are involved);  
(d) HNS Convention (if more owners);  
(e) Basel Protocol (more persons liable).

5. Other solution: Notifier (Exporter-Importer)

31. Basel Protocol, art. 4 (1-4).

6. Other solution: Disposer

32. No examples found in Convention texts.

**B. Exemptions**

1. Natural disasters

33. (a) CRTD Convention, art. 5 (4);  
(b) Lugano Convention, art. 8 (a);  
(c) CLC Convention, art. III, para. 2;  
(d) HNS Convention: natural phenomenon of an exceptional inevitable and irresistible character;  
(e) Vienna Convention: Except in so far as the law of the installation State may provide to the contrary, the operator shall not be liable for nuclear damage caused by a nuclear incident directly due to a grave natural disaster of an exceptional character;

(f) Basel Protocol, art. 4(5): The result of a natural phenomenon of exceptional, inevitable, unforeseeable and irresistible character.

2. Use of best available technology

34. No examples found in Convention texts.

3. War or similar situations

35. (a) CRTD Convention, art. 5(4);

(b) Lugano Convention, art. 8(a): the damage resulted from an act of war, hostilities, civil war, insurrection;

(c) Basel Protocol art. 4 (5);

(d) CLC Convention, art. 3 (2) (a);

(e) HNS Convention, art. 7 (2) (a);

(f) Vienna Convention, art. 4 (3) (a): was the result of an armed conflict, hostilities, civil war or insurrection.

4. Third party behaviour

36. (a) CRTD Convention, art. 5 (4): the damage was wholly caused by an act or omission with the intent to cause damage by third party;

(b) Basel Protocol, art. 4 (5) (d): Wholly the result of the wrongful intentional conduct of a third party, including the person who suffered the damage;

(c) Lugano Convention, art. 8 (b): was caused by an act done with the intent to cause damage by a third party, despite safety measures appropriate to the type of dangerous activity in question;

(d) CLC Convention, art. 3 (2) (b): was wholly caused by an act or omission done with intent to cause damage by a third party;

(e) HNS Convention, art. 7 (2) (b): the damage was wholly caused by an act or omission done with the intent to cause damage by a third party.

5. Other reasons

37. (a) Basel Protocol, art. 4 (5) (c);

(b) Lugano Convention, art. 8 (c): the damage was the result of compliance with a compulsory measure of a public authority 15/.

**IV. ENFORCEMENT OF LIABILITY (JURISDICTION)**

**A. By domestic (national) courts of the State where the pollution has occurred (originated)**

38. (a) CONVENTION ON THIRD PARTY LIABILITY IN THE FIELD OF NUCLEAR ENERGY, art. 13;

(b) Vienna Convention, art. 11.

**B. By domestic courts of the affected State**

39. (a) CLC Convention, as amended by the 1992 Protocol, art. IX, par.1;

(b) HNS Convention, art. 38, par. 1.

**C. By both**

40. (A choice is offered between the courts of the State where the pollution has occurred or those of the affected State).

- 41. (a) Lugano Convention, art. 19;
- (b) CRTD Convention, art. 19, par. 1;
- (c) Basel Protocol, art. 17.

**D. By international bodies (e.g. claims commissions)**

- 42. No examples found in Convention texts.

**V. INSURANCE AND FINANCIAL GUARANTEES**

**A. Obligation to insure**

- (a) CRTD Convention, art. 13, par.1;
- (b) HNS Convention, art. 12, par.1;
- (c) Basel Protocol, art. 14, par.1.

**B. Obligation to compensate incumbent**

1. Obligation on the operator

- 44. No examples found in Convention texts.

2. Obligation on the insurance company

- 45. No examples found in Convention texts.

3. Obligation on the State

- 46. No examples found in Convention texts.

4. Obligation on, jointly and severally,

47. (a) The insurance and the carrier (CRTD Convention, art. 15, par. 1);
- (b) The insurance and the owner (HNS Convention, art. 12, par.8);
- (c) The insurance and the persons responsible under article 4 of the Basel Convention (Basel Protocol, art. 14, par.4, but see also par. 5: states parties can declare, by notification, that they do not accept the direct action against the insurer provided by par. 4).

**VI. COMPENSATION FUND**

**A. Financed by States Parties**

48. International Oil Pollution Compensation Fund (IOPC Fund) on the basis of the CONVENTION ON THE ESTABLISHMENT OF AN INTERNATIONAL FUND FOR COMPENSATION FOR OIL POLLUTION DAMAGE (as amended in 1984 and 1992). A fund was also created under the HNS Convention, along the lines of the IOPC Fund.

49. Characteristics:

- (a) On a voluntary basis (see the above convention and the HNS Convention);
- (b) Residual obligation (Vienna Convention: the state as a guarantor of the payment of claims for compensation established against the operator);
- (c) Subsidiary liability for a wrongful act (CRAMRA, art. 18, para. 3(a)).

**B. Financed by States Parties which are potential polluters**

50. No examples found in Convention texts.

**C. Financed by other sources**

51. The TSVP Draft Supplementary Fund Convention (a negotiated instrument that will supplement the regimes of the Vienna and Paris Conventions) proposed two alternatives:

(a) Establishment of three tiers of compensation: (i) out of funds from the insurance or other financial security of the operator up to a certain limit; (ii) public funds of the state where the liable person is situated; (iii) contributions from Contracting Parties (fixed contributions by Contracting Parties with an open-ended total amount of supplementary funding);

(b) Same three-tier system with the difference that a total financial limit shall be set and that the contributions would vary according to the number of Contracting Parties.

Notes:

1/ References are only made to conventional texts. Other texts are referred to in notes.

2/ There are two approaches possible: consideration of damage in a transboundary context only or consideration of damage both within the national and the transboundary context. There are many arguments in favour of a transboundary context. The second approach is taken by the Protocol on Water and Health to the Water Convention.

3/ Accidental pollution of transboundary inland waters means the introduction, directly or indirectly, of hazardous substances into transboundary inland waters as a result of incidents originating wholly or partly within an area under the jurisdiction of one country, which causes or threatens to cause significant impairment of the quality of transboundary inland waters and/or significant damage to aquatic ecosystems in an area under the jurisdiction of another country (UNECE Code of conduct on accidental pollution of transboundary inland waters, E/ECE/ 1225, ECE/ENVWA/16/1990, I (b)).

4/ Industrial pollution: As the project started as a consequence of industrial accidents, these accidents should be the cornerstone of a liability regime. However, there are other issues which do not fall under the Industrial Accidents Convention such as accidents of oil and other pipelines, and tailing dams (it is not yet sure whether they are covered by this Convention), as well as hazardous activities which are below the limits indicated in annex I to this Convention.

5/ Natural disasters: “any natural event including such phenomena as floods, ice drifts, earthquakes, landslides and hurricanes, which causes or threatens to cause accidental pollution of transboundary inland waters” (UN/ECE Code of conduct on accidental pollution of transboundary inland waters, E/ECE/1225, ECE/ENVWA/16/1990, I (e)). Floods, for

example, can have a severe impact on human health and safety, property, and the aquatic and terrestrial ecosystems. They can give rise to industrial accidents if installations are not designed to provide protection against floods. Recommendations on sustainable flood prevention have been adopted by the Parties to the Water Convention at their second meeting (ECE/MP.WAT/5). They do not cover liability issues as such, but the need to have proper insurance is highlighted. In principle, installations should be safe in case of floods with a certain recurrence interval, in case of ice drifts of a certain amount and duration, and in case of droughts of a certain duration. Numerical values for the above situations can be agreed on. These values may, however, depend on certain catchment area specific conditions (e.g. morphology, climate). Up to these numerical values the owner has to ensure that his installation is safe.

6/ This matter can also be examined only in the context of Part III on Exemptions.

7/ According to one opinion the question of impact should be examined within the context of “Conditions of liability” or, according to another, within the context of “Damage”.

8/ See transboundary impact.

9/ See note no. 3 above.

10/ Any natural event including such phenomena as floods, ice drifts, earthquakes, landslides and hurricanes, which causes or threatens to cause accidental pollution of transboundary inland waters (UNECE Code of conduct on accidental pollution of transboundary inland waters, E/ECE/1225, ECE/ENVWA/16/1990, I ( e)).

11/ No direct definition. See *supra* related notions, such as [transboundary] impact and effects of industrial accidents as defined in art. 1 (c) of the Industrial Accidents Convention.

12/ See note no. 5 above.

13/ In some liability texts “preventive measures” means measures taken after the incident to prevent the occurrence of a new one.

14/ An operator can be either a State or a legal person or a natural person.

15/ CRTD Convention art. 5, par. 5 (c), 19.