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**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**

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**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 */

**EXISTING INTERNATIONAL LEGAL INSTRUMENTS ON CIVIL LIABILITY
APPLICABLE TO WATER-RELATED INCIDENTS:
COVERAGE AND POSSIBLE GAPS**

*/ This document has not been formally edited.

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Introduction

1. The report on responsibility and liability in relation to accidental water pollution (MP.WAT/2001/1 – CP.TEIA/2001/1) contains annex II entitled “Existing international legal instruments on civil liability applicable to water-related incidents: coverage and possible gaps”. This study was commissioned by the expert group on liability, and prepared by Ms. N.Horbach, Centre for Transboundary Damage and Compensation (Netherlands).
2. For technical reasons, this annex is issued as an addendum. Apart from minor editorial changes, the study is issued in the format in which it was received by the secretariat.

I. METHODOLOGY AND APPROACH

3. The main objective of the current study on liability and compensation regimes of relevant existing agreements and instruments applicable in the ECE region is to identify gaps with regard to liability rules where action within the framework of the ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes could add value (e.g. means to recover damages for the accidental transboundary pollution of international watercourses and international lakes currently not covered by existing liability regimes). For this purpose, an initial inventory of relevant bilateral and multilateral agreements was made, while, as indicated, excluding all agreements which deal exclusively with the marine environment, those which do not cover the ECE region, and those which are not linked to industrial accidents (in a very broad sense). This has resulted in the creation of three tables:

Table 1 covers the application of the relevant documents to the ECE countries, providing information on the current status of the instruments (ratifications, signatures, year of entry into force). The documents are divided into two main categories (see *infra*);

Table 2 covers those treaties and documents that incorporate a liability and compensation regime applicable to water-related incidents;

Table 3 aims to reflect the potential liability coverage by the relevant documents of certain identified and typical incidents that might cause adverse effects to transboundary waters or international lakes.

4. Explanatory notes on the terminology and acronyms used in the tables are appended (appendices I and II).

II. DOCUMENTS AND SCOPE

5. The documents analyzed cover those international agreements and instruments assembled, the liability rules of which can or are likely to be applicable in case of incidents

causing environmental injury in transboundary watercourses or international lakes. In very general terms this might involve: a) activities of a typically dangerous nature; b) activities involving transport of dangerous and hazardous substances; c) activities involving the transboundary movements of hazardous wastes; d) activities involving the use of nuclear materials; e) activities involving the carriage of oil, and f) activities concerning the launching of space aircraft. Although not providing for rules on liability and compensation, the Aarhus Convention has been nevertheless included. It is considered to be relevant to the extent that it explicitly guarantees access to information of victims which, *inter alia*, facilitates them to establish a causal link between the damage and the damaging activity or substance. Similarly, the EEX Lugano Convention was included since it aims to ensure reciprocal recognition and enforcement of judgments of courts or tribunals, important in those situations where other relevant conventions are not applicable or do not ensure such right explicitly. The acronyms and scope of application of these agreements are briefly described in appendix III.

6. A division has been made between those conventions that cover basic liability and compensation rule (Category I) and those types of agreements that are of a supplementary nature involving regulation of funds, supplementary compensation or other additional financial mechanisms, and which are to be read in conjunction with the basic convention to which they relate (Category II).

7. A number of other conventions that are relevant in the sense that they could impose primary rules and obligations on States and persons (legal and private) to prevent pollution damage in general, and in international watercourses and international lakes more specifically, were not used in the tables. Despite frequent references to these instruments, consideration fell outside of the scope of coverage of the research due either to the absence of specific liability or responsibility rules or inapplicability to the subject of the research, or the fact that their coverage is confined to two or a limited number of ECE States, or merely refer to other conventions as being applicable.

III. TENTATIVE CONCLUSIONS

8. There currently exist various civil liability rules incorporated in international legal instruments that cover topics varying from very wide and general to very specific and confined types of transboundary damage. Those considered here are either of a global nature or cover the ECE region. However, more than half of these conventions did not yet enter into force, which is especially regretful in respect of those that potentially cover a wide range of water-related incidents involving damage through transboundary watercourses or international lakes (see table 1).

9. Virtually all of these conventions provide for strict liability imposed upon a type-identified liable person, subject to traditional (restricted) exonerations, liability limitation in time and amount, covering traditional types of damage (personal injury, property and related loss therefrom) which are compensatable if the victim proves a certain relaxed causal link before multiple or one single court(s), the judgment of which is enforceable and recognized in other State Parties. Less uniformity exists in respect of the applicable geographical scope, additional funding, types of environmental damage explicitly covered, the use of thresholds, organizational actions and types of continuous or non-accidental incidents (see table 2).

10. From the various case studies (see table 3) analyzed in respect of international lake- or transboundary watercourse-related incidents that could have an impact on the environment, property or health (whether domestically or transfrontier), certain conclusions can be drawn. The types of incidents that could potentially fall within the scope of existing international civil liability regimes are in principle confined to accidents that involve certain identified dangerous activities or occurring in the course of identified forms of transportation, whereas types of "normal operations" generally are not covered. However, a number of cases involving transboundary water pollution from industrial accidents seem to be sufficiently covered.

11. For instance, various types of accidents causing pollution to water resources resulting from the transport of dangerous goods by road, rail and inland navigation vessels are covered as long as damage results from the hazardous properties of the goods involved and specified under the CRTD liability regime. This would cover domestic and international carriage, and transboundary damages. Excluded are, however, types of continuous or synergic pollution, although spills involving residues in tank containers would be covered.

12. Water-related damage resulting from the use of nuclear material, whether transported or not, would always be recoverable under the existing nuclear liability regimes, unless it involves uranium mining, reprocessing or types of uranium fuel. However, under the updated nuclear liability regimes the scope of application is considerably extended, while future extensions are facilitated by new mechanisms. Accidents resulting from small quantities of nuclear material or those of a minor risk that are excluded, could further be possibly covered under the CRTD, if transported by rail, road or inland navigation vessels.

13. In addition, should damage to water resources result from transboundary movements, disposal or dumping of hazardous wastes - the list of which is non-exhaustive - compensation for traditional and environmental damage can be recovered under the Basel Protocol. This includes processes of loading and unloading, likely to take place near rivers or lakes. A similar conclusion can be drawn in respect of the possibility, however remote, that damage results from sea-going vessels that carry hazardous and noxious substances or oil, including where such vessels navigate in inland waters. Since the relevant conventions also cover (un)loading processes, the resulting damage or adverse effects to inland waters that could hypothetically arise near harbours would thus be covered (HNS, CLC).

14. Apart from the situations covered above, a very substantive number of incidents that could result in damage to inland water resources are covered under the Lugano Convention. Despite its wide scope - it covers GMO, micro-organisms, operations concerning wastes, carriage by pipelines, continuous or synergic pollution and, contrary to CRTD, carriage or transport inside installations inaccessible to the public - it nevertheless is confined to activities that must be dangerous to the environment or health and professionally undertaken.

15. The situation is different in respect of activities not undertaken in an industrial or professional capacity, not hazardous or dangerous, or not involving a dangerous substance, waste, oil or nuclear substance. Should damage to water resources result from such activities compensation will most likely have to be obtained on the basis of rules of international private law. The gaps in existing liability regimes applicable to water-related damage within the ECE region, therefore, are limited to normal or non-hazardous activities, such as changing the watercourse or water flow by dams or reservoirs, natural disasters or activities or emissions not dangerous to the environment (often not prohibited) but aggravating the consequences of natural disasters such as floods and drought, as well as incidents involving military installations (see table 3)

Table 1: Conventions

CONVENTIONS STATUS	CATEGORY I											CATEGORY II				
	Lugano 93	CRTD89	BaselProt 99	HNS96	ParisNuclear 60	ViennaNuclear 63	ViennaProt 97	CLC69	CLCProt 92	SpaceLiability 72	Aarhus 98	EEA Lugano 88	BrusselsSupp 63	CSC97	FUND71	FUNDProt 92
	1	2	3	4	5	6	7	8a	8b	9	10	11	12	13	14a	14b
Number	NF	NF	NF	NF	68	77	NF	75	96	72	NF	92	79	NF	78	96
In force																
Albania								X			S				X	
Andorra																
Armenia						X					S					
Austria										X	S	X				
Azerbaijan											X					
Belarus						X	S				X					
Belgium					X			D	X	X	S	X	X		D	X
Bosnia & Herzegovina						X										
Bulgaria					X	X				X	S					
Canada			S					D	X	X				D	X	
Croatia						X		D	X		S			D	X	
Cyprus	S							D	X		S			D	X	
Czech Republic						X	S			X	S					
Denmark			S	S	X			D	X	X	X	X	X	S		X
Estonia						X		X			S			X		
Finland	S		S	S	X			D	X	X	S	X	X		D	X
France			S		X			D	X	X	S	X	X		D	X
Georgia								X	X		X					X
Germany		S		S	X			D	X	X	S	X	X		D	X
Greece	S				X			D	X	X	S	X			D	X
Hungary			S			X	S			X	S					
Iceland	S							X	X	S	S	X			X	X
Ireland								D	X	X	S	X			D	X
Israel						S				X						
Italy	S				X		S	D	X	X	S	X	X	S		X
Kazakhstan								X			S			S		
Kyrgyzstan																
Latvia						X		X	X		S					X
Liechtenstein	S									X	S					
Lithuania						X	S		X		S			S		X
Luxembourg	S		S					X	X	X	S	X				
Malta								X	X	X	S					
Morocco		S				S	X	D	X	S				X	D	X
Monaco			S					D	X		S				D	X
Netherlands	S			S	X			D	X	X	S	X	X		D	X
Norway				S	X			D	X	X	S	X	X		D	X
Poland						X	S	X	X	X	S	X			X	X
Portugal	S				X			X			S	X			X	
Rep. of Moldova						X					X					
Romania						X	X			X	X					
Russian Federation				X		S		D	X	X				X		X
San Marino																
Slovakia						X										
Slovenia					?	X		D	X	X	S				D	X
Spain					X	S		D	X		S	X	X		D	X
Sweden			S	S	X			D	X	X	S	X	X		D	X
Switzerland			S					D	X	X	S	X			D	
Tajikistan																
The FYR Macedonia			S			X					X					
Turkey					X											
Turkmenistan											X					
Ukraine						X	S				X					
United Kingdom			S	S	X	S		D	X	X	S	X	X	S		X
United States																
Uzbekistan																
Yugoslavia						X		X		X					X	

s = signed

d = denounced

x = contracting party

Table 3: Accidents

TYPE OF ACCIDENTS	Non-Industrial (transport, agriculture)		Mining Activity	Inland Navigation	Chemical Spill	Waste Disposal	Nuclear Transport	Harbour HNS Spill	Harbour Oil Spill	Pipeline Breakage	Chronic Pollution	Biological/GMO	Dam Water - Retention		Floods/Drought	
	A	B											A	B		
Applicable Treaties	A	B											A	B	A	B
Lugano 93	Lg		Lg		Lg					Lg	Lg	Lg		Lg		Lg
CRTD 89		CRTD	CRTD	CRTD	CRTD											
Basel 89/99						Bsl						Bsl				
HNS 96								HNS								
Vienna/Paris 60/63							PC/VC				PC/VC					
BSC/CSC 63/97							BSC/CSC				BSC/CSC					
CLC/Fund 92									CLC/Fund							
EEX Lug.		EEX	EEX	EEX	EEX	EEX	EEX	EEX	EEX	EEX	EEX	EEX	EEX	EEX	EEX	EEX
Aarhus 98		Aarh	Aarh	Aarh	Aarh	Aarh	Aarh	Aarh	Aarh	Aarh	Aarh	Aarh	Aarh	Aarh	Aarh	Aarh
Geographical Scope																
Transboundary	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg		Lg	Lg
outside CPs-area		Lg	Lg		Lg	Bsl	Vienna		CLC/Fund	Lg	Vienna	Lg	Lg		Lg	Lg
Liability																
Strict	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lug.	Bsl/Lg		Lg	Lg
Fault						Bsl							Bsl			
joint/several	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg		Lg	Lg
Person Liable																
Operator		Lg	Lg		Lg		PC/VC			Lg	PC/VC	Lg	Lg		Lg	Lg
Shipowner								HNS	CLC/Fund							
Carrier		CRTD	CRTD	CRTD	CRTD											
notifier (disposer)						Bsl							Bsl			
Exoneration																
Force majeure	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg		Lg	Lg
contributory fault	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl		HNS	CLC	Lg	Lg		Bsl/Lg		Lg	Lg
intent third-party	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg		Lg	Lg
Other (1)	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl		HNS	CLC/Fund	Lg	Lg		Bsl/Lg		Lg	Lg
Damage Covered																
life/personal/physical	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg		Lg	Lg
property loss/damage	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg		Lg	Lg
reinstatement environment	Lg.	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	VC/CSC	HNS	CLC/Fund	Lg	VC/CSC	Lg	Bsl/Lg		Lg	Lg
other environmental loss	Lg.	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	VC/CSC	HNS	CLC/Fund	Lg	VC/CSC	Lg	Bsl/Lg		Lg	Lg
preventive measures	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	VC/CSC	HNS	CLC/Fund	Lg	VC/CSC	Lg	Bsl/Lg		Lg	Lg
other econom.loss(NL)	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	VC/CSC	HNS	CLC/Fund	Lg	VC/CSC	Lg	Lg		Lg	Lg
Limitation																
in amount		CRTD	CRTD	CRTD	CRTD	Bsl	PC/VC	HNS	CLC/Fund		PC/VC		Bsl			
in time	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg		Lg	Lg
Financial Security																
Mandatory		CRTD	CRTD	CRTD	CRTD	Bsl	PC/VC	HNS	CLC		PC/VC		Bsl			
direct action ag. Insurer		CRTD	CRTD	CRTD	CRTD	Bsl	PC/VC	HNS	CLC		Vienna		Bsl			
Funds																
additional funds							PC/VC	HNS	FUND		PC/VC					
Jurisdiction																
regulated by treaty	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg		Lg	Lg
Enforcement	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg	EEX	Lg	EEX
Right to Claim																
State/organ	Lg.	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	Vienna (Pos)	HNS	CLC/Fund	Lg	Vienna (Ps)	Lg	Bsl/Lg		Lg	Lg
private&pubic person	Lg	CRTD	LgCARTD	CRTD	Lg/CRTD	Bsl	PC/VC	HNS	CLC/Fund	Lg	PC/VC	Lg	Bsl/Lg		Lg	Lg
Organizational action	Lg	CRTD	Lg/CRTD	CRTD	Lg/CRTD	Bsl	VC/CSC	HNS	CLC/Fund	Lg	VC/CSC	Lg	Bsl/Lg		Lg	Lg
Special Duties																
Prevention	Lg		Lg		Lg	Bsl				Lg	Lg		Bsl/Lg		Lg	Lg
access to public info	Lg	Aarh	Lg	Aarh	Lg	Aarh	Aarh	Aarh	Aarh	Lg	Aarh	Lg	Lg	Aarh	Lg	Aarh
remedy/cleanup	Lg		Lg		Lg					Lg	Lg		Lg		Lg	Lg

Lg – Lugano

Bsl – Basel

Aarh - Aarhus

Appendix I

EXPLANATORY NOTES: ABBREVIATIONS AND TERMS USED IN THE TABLES

I. GEOGRAPHICAL SCOPE

1. **Transboundary damage:** Any significant adverse impact caused by an event or conduct undertaken within an area under the jurisdiction of one State (Party) affecting the environment, personal health or property within any other area.
2. **PREV:** This marks the fact that although the relevant documents are not extended to areas of non-Contracting Parties, it does cover costs of preventive measures taken in respect of damage occurring in Contracting Parties to the Convention. Such is the case under HNS and CLC.
3. **Outside the CP area:** The geographical application of the documents under consideration could possibly be applied to areas beyond the jurisdiction or control of the Contracting Parties of the Convention (e.g. HNS, CLC, FUND) or to the extent they cover costs of preventive measures wherever taken (see **PREV**), and areas beyond any national jurisdiction of any State (Basel Protocol, Vienna Protocol), as well as incidents occurring in non-Contracting States provided damage is suffered in Contracting State (see **POS**).

II. ACTIVITIES COVERED

4. **Industrial:** Refers to economic activities performed in an industrial capacity, even by public authorities (Lugano Convention). None of the other analyzed instruments employ this term as such. Transport activities are not considered to be industrial activities, depending upon the interpretation used (HNS, CLC).
5. **Non-Industrial/Transport:** Activities not related to industrial processes as well as non-industrial use of hazardous substances or materials. Non-industrial activities include transport, agriculture, as well as those listed in the “UN International Standard Industrial Classification of All Economic Activities, Third Revision” (ST/ESA/STAT/SER.M/4/Rev.3). (The Lugano Convention is limited: an activity involving hazardous substances in an installation or during transport, or involving manufacturing, use, storage, disposal, dumping, handling of such substances provided it is undertaken in a professional manner).
6. **Accidental:** Due to an accidental or sudden occurrence, or mostly considered the “result of incidents” which in many definitions can be either a man-made accident or a natural disaster. Most documents only use man-made activities in general, such as the Basel Convention, CRTD, and the Lugano, CLC and FUND Conventions, others specify the kind of human activity involved, such as the nuclear conventions. HNS also includes under incident a

“grave and imminent threat of causing damage”, just like the Basel and Vienna Protocols, CLC, FUND, CRTD and Lugano Conventions.

7. **Gradual (series):** Damage caused during normal operation including a non-accidental/non-sudden occurrence. Documents do not specify explicitly whether types of chronic or gradual pollution caused during normal operation are covered. However, the Lugano Convention (“continuous occurrence”) 1/ and the nuclear conventions (“succession of occurrences”) do seem to cover it. Other instruments only refer to “series of occurrences” or indicated as “S”, which, in the light of the worldwide legal developments might include certain types of gradual pollution, depending also upon the damage thresholds. Only the Space Liability Convention does not refer to “series of occurrences”.

8. **POS:** Possible under certain limited circumstances could be interpreted to cover such feature.

9. **S:** Those documents that are unclear as to whether they cover chronic pollution, but reference is limited to any occurrence or series of occurrences having the same origin, which causes pollution damage.

III. LIABILITY

10. **Strict liability:** Could include objective liability or liability without fault or include situations where the text of the convention refers to “absolute liability”, such as the Vienna Convention and the Space Liability Convention.

11. **Fault liability:** Some treaties apply, apart from strict liability, also fault liability to deal with types of injurious consequences that are considered to be less “hazardous” or should be treated less stringent. These include, for example, the Space Liability Convention (art. III, for damage being caused elsewhere than on the surface of the earth to a space object of one launching State or to persons or property on board thereof), and the Basel Protocol (art. 5, for damage caused or contributed to by any other person due to lack of compliance with the provisions).

12. **Person liable:** This could be a person (legal or private) or include also the State and its organs. “Operator” does not include a State or State organ under the Basel Convention/Protocol and the Paris Convention, where person is defined as either legal or private person. However, under the Space Liability Convention, the operator, i.e. the launching State, cannot be a private or a legal person, but is entirely confined to a State activity for which the launching State will be liable. On the contrary, the HNS, Lugano Convention, CRTD, CLC and Vienna Convention do include State or its organs explicitly in their definition of carrier, operator or notifier. Under the Paris, Basel and Vienna Conventions, the person liable cannot be the State or its organs.

13. **Natural disaster:** Grave natural disaster of an exceptional character (CSC, Vienna and Paris Conventions), a natural phenomenon of an exceptional, inevitable and irresistible

character (CRTD, CLC, HNS, Lugano Convention), a natural phenomenon of exceptional, inevitable, unforeseeable and irresistible character (Basel Protocol).

14. **NL:** If permitted by the general law on civil liability of the competent court.

15. **Other (1):** This includes exoneration of liability for damage resulting from compliance with a specific order or compulsory measure of a public authority; caused by pollution at tolerable levels under local relevant circumstances; or caused by a dangerous activity taken lawfully and reasonably in the interests of the person who suffered the damage (Lugano Convention); the consignor or any other person failed to meet his obligation to inform him of the dangerous nature of the goods (CRTD) or cases where no exoneration is allowed due to the fact that damage has resulted from activities conducted by a launching State in violation of international law (art. VI (2), Space Liability Convention); installations used for non-peaceful purposes (Vienna and Paris Conventions). Under the FUND 71, certain exonerations exist towards the owner that would relieve the IOPC Fund from paying money, these do not involve natural disaster or preventive measures, but do involve warlike events, contributory negligence, intent of third party as well as other types. Similarly, the HNS Fund is exonerated from its financial obligations if it proves damage resulted from warlike events or 'HNS' involved in war and warlike activities or only on Government non-commercial service, or the claimant cannot prove that there is a reasonable probability that the damage resulted from an incident involving one or more ships. If the HNS Fund proves that the damage resulted wholly or partly either from intentional conduct by the victim, the HNS Fund may be exonerated wholly or partially from its obligation to pay compensation to such person.

IV. COMPENSATION

16. **Personal & property damage:** Includes all economic loss arising from personal or physical injury, loss of life, or property damage or loss, insofar as not included in those subparagraphs, if incurred by a person entitled to claim in respect of such loss or damage.

17. **NL:** If permitted by the general law on civil liability of the competent court.

18. **Reinstatement measures:** Costs of measures of reinstatement of impaired environment (unless such impairment is insignificant, Vienna Protocol and CSC), which, other than loss of profit from such impairment, is limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken.

19. **Environment (other):** Pure ecological damage (damage to biodiversity), in cases where restoration or re-establishment of the environment is impossible, i.e. types of damages, which cannot be evaluated financially and any reinstatement of the environment is in theory impossible. For instance, in the case of the disappearance of an animal species or irreparable destruction of a biotope (Lugano 2/), the CLC eliminates claims for impairment of the environment *per se*. Contrary to the Lugano Convention, CLC also does not explicitly allow the recoverability of the costs of acquiring the equivalent of the damaged natural resources or

replacing them ^{3/}. Most treaties therefore limit types of loss of income or loss of profits deriving from an economic interest in any use or enjoyment of the environment, incurred as a result of a significant impairment of that environment (Basel, CSC, Vienna Protocol). In other cases all further loss or damage caused by contamination of the environment is compensable provided it is caused by the dangerous goods (CRTD) or by the hazardous and noxious substances (HNS). Or such damage should be caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever it may occur (CLC).

20. **Any other economic loss:** Pure economic damage, loss of income or loss of profits, other than any caused by the impairment or the contamination of the environment, and which is not a typical consequence of the types of risk under consideration, such as loss suffered as a consequence of the evacuation following an incident. Despite the fact that the text of most conventions does not make it clear whether such loss would be compensated, it is generally compensable as well to the extent no specific exclusion of pure economic loss as a head of recovery is included (see **POS**). This means that the matter in most cases will fall to be decided in accordance with applicable national law. The latter can be inferred from the explanatory reports of the CRTD and Lugano Convention,^{4/} or explicitly mentioned in CSC and Vienna Protocol. In many agreements, on the other hand, loss of profit or loss of income is expressly exempted from the limitation of compensation for environmental damage to measures of reinstatement (e.g. Basel Protocol in respect of “loss of income”; CRTD, HNS, Lugano Convention, CLC, Vienna Protocol, CSC in respect of “loss of profits”).

21. **Preventive measures:** Costs of preventive measures taken by any person after an incident has occurred, and further loss or damage caused by such measures, including costs of such measures in relation to a grave and imminent threat of causing such damage. Most documents refer to preventive measures taken after an incident occurred, but define incident as including an occurrence that created a grave or imminent threat of causing damage (e.g. CRTD, Basel Protocol, HNS, CLC, FUND). However, the 1997 nuclear conventions (CSC and Vienna Protocol) limit such extension of the definition of incident explicitly to preventive measures.

V. LIMITATIONS

22. **NOTE:** Certain conventions do not allow the liable person to limit his liability if he has contributed to the accident or resulting damage by either its negligent/reckless (CLC) or intentional conduct (HNS, CRTD), in which case liability will be unlimited.

VI. FINANCIAL SECURITY

23. **Financial security:** Except for the Space Liability and the Lugano Conventions, all treaties provide for mandatory insurance. Under most conventions this will have to match their civil liability under the respective conventions.

VII. FUNDS

24. **Additional funds:** A fund financed by the State (public fund) or by private persons involved in the activities covered by the respective conventions (private funds), which can either be financed individually (e.g. by the Installation State under the Vienna Convention) or jointly by all participants (IOPC Fund). Such funds aim to provide for compensation in case compensation from the liable person or its financial security is insufficient or otherwise not available, which can either be subsidiary or complementary.

VIII. THRESHOLDS

25. **Negligible/Tolerable:** Certain conventions will not apply if the risks involved are minor or acceptable (“due to the small extent of the risks involved”, Paris Convention) or do not provide compensation for damage that is considered to be negligible or does not exceed tolerable levels (Lugano Convention) or impairment that is insignificant (Vienna Protocol, CSC, and indirectly, CRTD).

IX. JURISDICTION

26. **Regulated by treaty:** This aims to indicate whether the relevant convention comprises rules that determine which courts (either single in case of the nuclear conventions, or multiple in others) have jurisdiction or whether it provides for other forms of compulsory settlements, or claims commissions (e.g. Space Liability Convention).

X. INJURED PARTY

27. **Organizational action:** An organizational action for damage, including any association or foundation which according to its statutes aims at the protection of the environment and which complies with any further conditions of internal law of the Party where the request is submitted and that may therefore be entitled to take certain measures, or, to claim before the court for compensation of damage or costs of preventive measures, injunction, cessation of wrongful act etc. (e.g. art. 18 of the Lugano Convention).

XI. OTHER REMARKS

28. **Air, soil, water:** Except for the oil pollution conventions, all relevant treaties seem to cover pollution of soil, water and air.

Appendix II

EXPLANATORY NOTES: TYPES OF ACCIDENTS

1. **Non-Industrial (A):** An activity undertaken by a person but not performed in an industrial capacity, which involve the use of certain hazardous substances or operation of wastes that have an adverse impact on inland waterways, for example, the agricultural use of a certain hazardous substance or adversely affecting the quality of the water and causing pollution (by an continuous or sudden occurrence) or such pollution resulting from the carriage of a hazardous substance performed entirely in an installation or on a site inaccessible to the public where it is accessory to other activities and is an integral part thereof.
2. **Non-Industrial (B):** An activity undertaken by a person but not performed in an industrial capacity, which involve the carriage of certain hazardous substances that have an adverse impact on inland waterways. For example, the carriage of certain fertilizers or other hazardous substances, residues in empty but un-cleaned tank vehicles, demountable tanks or tank containers or by hazardous wastes, the release of which adversely affected the quality of the water causing pollution (by a series or sudden occurrence). This could include damage occurring during processes of loading and unloading, which could give rise to serious damage outside the place in which they were performed.
3. **Mining Activity:** An activity involving mining operations performed in an industrial capacity, which could involve coal mining, mining of metal ores, gold mining, extracting of crude petroleum and natural gas, facilities for uranium mining and milling, or other mining facilities, which adversely affect inland waterways through significant impact from river dumping or otherwise release in inland waterways. Examples include high sediment deposition rates expected to cause obliterate impact on the fish habitats and food resources, impacts occurring from: solids derived from construction activities, and tailings discharge and waste rock dumping operations; cyanide contained in tailing discharge or spilled as a result of tailings dam breakage; heavy metals associated with the tailings discharge, leakage of such dangerous substances occurring during transport by private trucking firm etc.
4. **Inland Navigation:** Inland water-related damage resulting from the carriage of dangerous goods by inland navigation vessels or resulting from release of residues in empty but uncleaned tank containers or by hazardous wastes, the release of which adversely affected the quality of the water and causes pollution (by a series or sudden occurrence).
5. **Chemical Spill:** An activity undertaken in a professional capacity resulting in an accidental release of chemicals causing inland water-related damage, or such release occurring during processes of loading and unloading, which could give rise to serious damage outside the place in which they were performed 5/, or damage caused to water quality as a result of leakage from dangerous substances or wastes containing large quantities of toxic, persistent and bio-accumulative chemicals treated in a certain facility close to main waterways.

6. **Waste Disposal:** An activity involving the generation, storage, transport, treatment, re-use, recycling, recovery or final disposal of hazardous wastes, uncontrolled movement and dumping of hazardous wastes, including incidents of illegal dumping, which because it is dumped indiscriminately, spilled accidentally or managed improperly, cause adverse effects on inland waters or lakes resulting in severe health problems, or poisoning water and land 6/.
7. **Nuclear Transport:** A nuclear incident causing nuclear damage occurring during the transport of nuclear materials, including the gradual release of certain radioactive materials, causing contamination of the waters, or affecting the food chain.
8. **Pipeline breakage:** The adverse impact on water quality of inland waters resulting from the breakage of pipelines through which certain dangerous substances are carried, for example, breakage of pipeline used for certain dangerous types of mineral oils or clinical wastes.
9. **Chronic pollution:** Inland water-related damage resulting from the continuous release of certain substances which through gradual and accumulating effects result in such large quantities or composition that they become dangerous to the environment.
10. **Biological/GMO:** Research activities or activities undertaken otherwise in a professional capacity involving the production, culturing, handling, storage, use, destruction, disposal, release or any other operation dealing with one or more genetically modified organisms or micro-organisms, or micro-organisms which are pathogenic or which produce toxins having an adverse effect on the inland water environment (whether by continuous occurrence, series of occurrences or a sudden occurrence).7/
11. **Dam Water Retention:** This could involve man-made reservoirs, usually formed by damming rivers, undertaken by public authorities for purposes of, for example, fisheries, hydroelectricity generation, flood control, low flow enhancement, transport, recreation, spoil storage, electricity generation, or agricultural uses, which (see **A**) result in damage involving no dangerous substances or are not related to activities considered to be dangerous or which (see **B**) possibly involve an activity considered to be dangerous to the environment, or involve a hazardous substance, or create a change in the quality or quantity of the water in such a way that it leads to aggravation of pollution or endangers water living resources (sediments, saline intrusion etc.)8/.
12. **Floods or Drought:** Activities, whether industrial, agricultural or otherwise that aggravate, intensify or contribute to natural disasters such as floods or drought, causing adverse effects to either the quality or quantity of inland waters. This could relate to normal not prohibited or dangerous operations and not involve any dangerous substances or release or otherwise involve an activity dangerous to the environment, for example, changing of watercourses (see **A**)9/. This could also involve certain activities that might be qualified as “dangerous” or lack of due care or prevention (*sic utere tuo*). Examples include the existence of a so-called "closed circuit" - no water allowed to be discharged to the environment - which

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triggered by the difficult meteorological conditions, such as heavy rains or snowfall, enables discharge of water to surpass safe water levels within a dam causing flooding of contaminated water, or due to severe drought changing the composition and quality of the water through otherwise safe discharge of waste water in such a manner as to violate environmental standards for discharge (see **B**)10/.

Appendix III

SCOPE OF DOCUMENTS USED

**I. LUGANO CONVENTION ON CIVIL LIABILITY
FOR DAMAGE RESULTING FROM ACTIVITIES DANGEROUS
TO THE ENVIRONMENT,
done at Lugano on 21 June 1993 (not in force)**

1. Abbreviation used in the tables: Lugano 93.
2. Scope: Regional/EU Region. The Council of Europe's Lugano Convention aims at ensuring adequate compensation for damage resulting from activities dangerous to the environment and also provides for means of prevention and reinstatement. It applies to incidents in the territory of a State Party, regardless of where the damage is suffered, as well as to incidents outside such territory if conflict of laws rules lead to the application of the Convention. The extension of the territorial application of the Convention can be based on reciprocity rules. It covers damage (e.g. personal, property, impairment of environment, including cultural heritage and landscapes) caused by an indicative and non-exhaustive list of dangerous activities carried out in a professional capacity, including activities conducted by public authorities, involving dangerous substances, genetically modified organisms or micro-organisms and operations concerning wastes. It does not apply to damage arising from carriage, including the process of loading and unloading, nuclear substances covered by the nuclear treaties or equally favourable internal law, seabed exploitation, transport and military activities. However, it does apply to carriage by pipeline, as well as to carriage performed entirely in an installation or on a site inaccessible to the public where it is accessory to other activities and is an integral part thereof.

**II. ECE 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)**

3. Abbreviation used in the tables: CRTD 89.
4. Scope: Global. It aims to establish uniform rules ensuring adequate and prompt compensation for damage during international and domestic inland carriage of dangerous goods, packaged and those carried in bulk, by road, rail, and inland navigation vessels, the latter to avoid overlap with the HNS Convention 11/. This also covers the periods during

processes of loading and unloading. It applies to cases where the inherent dangerous properties of the goods might give rise to damage of exceptional gravity and not only in extreme circumstances, caused by an incident occurring in a State Party and also sustained on the territory of Contracting States or in their territorial waters by inland navigation vessels. The Convention is restricted to situations where both damage is suffered and incidents occurred in Contracting States. Transfrontier damage suffered in non-Contracting States is only covered in case of costs of measures taken to prevent or minimize damage in State Parties. It is not applicable to a) nuclear damage for which operators of nuclear installation are liable under either international agreements or national legislation 12/; b) certain given substances that are excluded due to their relative minor danger; c) damage arising from carriage in places non-accessible to the public 13/; d) damage from carriage of dangerous goods by pipelines.

III. PROTOCOL ON LIABILITY AND COMPENSATION FOR DAMAGE RESULTING FROM TRANSBOUNDARY MOVEMENTS (Basel Protocol), done at Basel on 10 December 1999 (not in force)

5. Abbreviation used in the tables: Basel Protocol 99.

6. Scope: Global. The 1999 Basel Protocol to the Basel CONVENTION ON CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL 14/ aims to provide for a comprehensive regime for liability and for adequate and prompt compensation for damage resulting from the transboundary movement of hazardous wastes and other wastes and their disposal including illegal traffic in those wastes, as regulated by the Basel Convention. The Basel Convention has as objective to minimize uncontrolled transboundary movements, dumping or disposal 15/ of certain hazardous wastes listed by the Convention (toxic, poisonous, explosive, corrosive, flammable, eco-toxic and infectious)16/ and includes also incidents of illegal dumping in developing countries by companies from developed countries. It applies to the territories under jurisdiction of the State Parties, including any land, marine area or airspace within which a State exercises administrative and regulatory responsibility in accordance with international law in regard to the protection of human health or the environment. Two non-exhaustive lists of wastes are appended, one on wastes banned for export and one on non-hazardous wastes.17/ The Protocol covers compensation for damages caused by accidental spills of such hazardous waste during export, import or during disposal and from the point of loading to the point of unloading on the means of transport. It applies only to damage suffered in an area under the national jurisdiction of a State Party arising from an incident as defined, as well as to areas beyond any national jurisdiction and non-Contracting States of transit, provided those States afford reciprocal benefits on the basis of international agreements. It does not apply to damage due to an incident that is covered under another liability and compensation regime affording equal or better protection.

**IV. CONVENTION ON LIABILITY AND COMPENSATION FOR DAMAGE
IN CONNECTION WITH CARRIAGE OF HAZARDOUS AND NOXIOUS
SUBSTANCES BY SEA (HNS),
done in London on 3 May 1996 (not in force)**

7. Abbreviation used in the tables: HNS 96.

8. Scope: Global. The HNS Convention aims to ensure that adequate, prompt, and effective compensation 18/ is available to persons who suffer damage caused by incidents in connection with the carriage by sea of hazardous and noxious substances (HNS). It applies to damage caused in the territory of a Contracting States, including the territorial sea and exclusive economic zones of States Parties, whenever the dangerous goods were carried as cargo on board “any sea-going vessel and any sea-borne craft of any type whatever” (including, e.g. hovercraft operated at sea). It applies to any HNS substances, materials and articles carried on board a ship including oils; other liquid substances defined as noxious or dangerous; liquefied gases; liquid substances with a flashpoint not exceeding 60°C; dangerous, hazardous and harmful materials and substances carried in packaged form; and solid bulk materials defined as possessing chemical hazards, as defined by reference to lists of substances included in various IMO Conventions and Codes. The Convention also covers residues left by the previous carriage of HNS, other than those carried in packaged form. The HNS Convention does not apply to pollution damage as defined in the CLC and FUND to avoid an overlap, as well as to damage caused by a radioactive material. It also does not apply to warships, naval auxiliary or other ships owned or operated by a State and used, for the time being, only on Government non-commercial service. However, HNS covers other damage (including death or personal injury) as well as damage caused by fire and/or explosion when oils are carried. It applies during the period from the time when the hazardous and noxious substances enter any part of the ship's equipment, on loading, to the time they cease to be present in any part of the ship's equipment, on discharge.

**V. CONVENTION ON THIRD PARTY LIABILITY
IN THE FIELD OF NUCLEAR ENERGY,
done in Paris on 29 July 1960 (in force since 1968)
as amended by Protocols of 1964 and 1982**

9. Abbreviation used in the tables: Paris Nuc Conv. 60.

10. Scope: Regional. The Paris Convention aims to ensure adequate and equitable compensation for persons who suffer damage caused in the event of a nuclear incident, which is understood to cover the cases of gradual radioactive contamination, but not normal or

controlled release of radiation. It has been extended to cover installations for the disposal of nuclear substances for the pre-closure phase and nuclear installations in the process of decommissioning, while excluding from the definition of reactor so-called sub-critical assemblies and small quantities of nuclear substances outside a nuclear installation, and certain other types of nuclear substances, such as reprocessed uranium.^{19/} It generally applies only to nuclear incidents occurring in connection with nuclear installations or in the course of transport and damage suffered by individuals or their property in the territory of the Contracting States, including territorial waters, unless the national law of the Contracting Party in whose territory the nuclear installation of the operator liable is situated, determines otherwise under article 2.^{20/} The general rule on the geographical application further mitigated by two OECD Steering Committee Recommendations on extending the territorial scope to include nuclear incidents occurring or damage suffered on the high seas and on the extension by national law to compensate for damages regardless of where the incident occurred even if in a non-Contracting State.^{21/} The latter would in practice only apply to damage occurring in the course of carriage, since it is only in this case that the operator of a Contracting State could be held liable under the Paris Convention for an incident occurring in a non-Contracting State.

VI. CONVENTION ON CIVIL LIABILITY FOR NUCLEAR DAMAGE, done at Vienna on 21 May 1963 (in force since 1977)

11. Abbreviation used in the tables: Vienna Nuc Conv. 63

12. Scope: Global. The Convention aims to regulate on a worldwide level a nuclear third-party liability regime and greatly resembles the Paris Convention, with largely similar terminology and definitions and legal mechanisms. However, there are certain significant differences, especially in respect of the geographical scope that cannot be extended to cover damage or incidents in non-Contracting States. The IAEA Standing Committee on Civil Liability for Nuclear Damage concluded in 1964 that the Convention applied to nuclear damage suffered in the territory of Contracting States and on or over the high seas regardless where the nuclear incident occurred, but did not apply to nuclear damage suffered in the territory of a non-Contracting State. In addition, the definition of nuclear installation cannot be altered to either add or remove certain nuclear facilities, nuclear fuel, or nuclear substances from the Convention's scope of coverage.^{22/} The Installation State can exclude any small quantities of nuclear material with low risks from the application of this Convention. Finally, although the Convention in principle deals exclusively with claims by "persons" under civil law in private legal actions against the operator, the fact that the definition of "persons" explicitly includes any "State" or "international organization" could imply the possible coverage of (State) responsibility claims under international public law.

**VII. PROTOCOL TO AMEND THE 1963 VIENNA CONVENTION
ON CIVIL LIABILITY FOR NUCLEAR DAMAGE,
done at Vienna on 12 September 1997 (not in force)**

13. Abbreviation used in the tables: Vienna Protocol 97.

14. Scope: Global. The Vienna Protocol aims to amend the 1963 Vienna Convention in order to extend the geographical scope to nuclear damage wherever suffered, including in territory of non-Contracting States, including established maritime zones (exclusive economic zones (EEZ)), or areas beyond the jurisdiction of any State, while adding a certain flexibility for the States.^{23/} It further aims to increase liability limits, and to extend the definition of nuclear damage,^{24/} but explicitly excludes its application to nuclear installations used for non-peaceful purpose. In addition, the scope of nuclear installations extends to such installations in which there are nuclear fuel or radioactive products or waste (as to be specified by the Board), but still does not explicitly cover radioactive waste disposal facilities nor make a reference to installations being decommissioned.^{25/} Finally, the Vienna Protocol also applies in case of a grave natural disaster of an exceptional character, and also covers damage to any other installation, also those under construction, at the same site, and to the means of transport.

**VIII. INTERNATIONAL CONVENTION ON CIVIL LIABILITY
FOR OIL POLLUTION DAMAGE (Oil Liability Convention),
done at Brussels on 29 November 1969 (in force since 1975) ^{26/}**

15. Abbreviation used in the tables: CLC 69.

16. Scope: Global. The CLC aims to ensure that adequate compensation is available to persons who suffer pollution damage caused by spills of persistent oil from laden tankers, and to harmonize international rules and procedures for determining questions of liability and for providing adequate compensation in such cases. The CLC covers pollution damage caused on the territory, including the territorial sea of States Parties, but not the exclusive economic zones (EEZ). It is applicable to ships that actually carry oil in bulk as cargo, i.e. generally laden tankers. Spills from tankers in ballast or bunker spills from ships other than tankers are not covered, nor is it possible to recover costs when preventative measures are so successful that no actual spill occurs. It does not apply to warships or other vessels owned or operated by a State and used for the time being for Government non-commercial service.^{27/}

**IX. PROTOCOL TO AMEND THE 1969 CLC CONVENTION,
done in London on 27 November 1992 (in force since 1996)**

17. Abbreviation used in the tables: CLC Protocol 92.

18. Scope: Global. The 1992 Protocol widened the scope of the Convention to cover pollution damage caused in the exclusive economic zone (EEZ) or equivalent area of a State Party. The Protocol covers pollution damage as before, but environmental damage compensation is limited to costs incurred for reasonable measures to reinstate the contaminated environment. It also allows expenses incurred for preventative measures to be recovered even when no spill of oil occurs, provided there was grave and imminent threat of pollution damage.

**X. CONVENTION ON INTERNATIONAL LIABILITY
FOR DAMAGE CAUSED BY SPACE OBJECTS,
done in London, Moscow and Washington on 29 March 1972 (in force since 1972)**

19. Abbreviation used in the tables: Space Liability 72.

20. Scope: Global. The Convention provides for absolute liability of launching States for damage caused by its space objects, including component parts of a space object as well as its launched vehicle and parts thereof, on the surface of the earth or to aircraft in flight. Damage includes loss of life, personal injury or other impairment of health; or loss of or damage to property of States or of persons, natural or juridical, or property of international intergovernmental organizations. For any other damage being caused elsewhere, fault liability is applied. The Convention does not apply to damage caused by a space object of a launching State to (a) nationals of that launching State; (b) foreign nationals during such time as they are participating in the operation of that space object from the time of its launching or at any stage thereafter until its descent, or during such time as they are in the immediate vicinity of a planned launching or recovery area as the result of an invitation by that launching State.

**XI. CONVENTION ON ACCESS TO INFORMATION, PUBLIC PARTICIPATION IN DECISION-MAKING AND ACCESS TO JUSTICE IN ENVIRONMENTAL MATTERS
(Aarhus Convention), done at Aarhus on 25 June 1998 (not in force)**

21. Abbreviation used in the tables: Aarhus 98.

22. Scope: ECE region. It aims to guarantee the rights of access to information, public participation in decision making, and access to justice in environmental matters in order to contribute to the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being. Such rights, which are also provided under the Lugano Convention as well as the ECE CONVENTION ON THE PROTECTION AND USE OF TRANSBOUNDARY WATERCOURSES AND INTERNATIONAL LAKES, relevant especially to the victim regarding its burden to proof of a causal link, are further specified in the Aarhus Convention.

**XII. CONVENTION ON JURISDICTION AND THE ENFORCEMENT OF JUDGMENTS IN CIVIL AND COMMERCIAL MATTERS,
done at Lugano on 16 September 1988 (in force since 1992)**

23. Abbreviation used in the tables: EEX Lugano.

24. Scope: EU/Regional. The Convention was negotiated between EC and EFTA Member States, and aims to determine the international jurisdiction of their courts, to facilitate reciprocal recognition and enforcement of judgments of courts or tribunals, and to introduce an expeditious procedure for securing the enforcement of judgments, authentic instruments and court settlements. It incorporates, with very few amendments, the rules on jurisdiction and enforcement of the 1968 Brussels CONVENTION ON JURISDICTION AND THE ENFORCEMENT OF JUDGMENTS IN CIVIL AND COMMERCIAL MATTERS, extending application of such rules to countries outside the EU.

**XIII. BRUSSELS CONVENTION SUPPLEMENTARY TO THE PARIS CONVENTION ON THIRD PARTY LIABILITY IN THE FIELD OF NUCLEAR ENERGY,
done at Brussels on 31 January 1963 (in force since 1974)
as amended by Protocols of 1964 and 1982**

25. Abbreviation used in the tables: BSC 63.

26. Scope: Regional. The Brussels Supplementary Convention (BSC) aims to supplement the Paris Convention with an additional second tier of public funds of Contracting

Party where the incident occurred and a third tier of joint public funds jointly by all the Parties to the BSC to compensate in case of nuclear incidents occurring and damage suffered only within the territory of the Contracting Parties to the BSC. Except for the geographical limitation to only the BSC Contracting Parties, the scope of coverage is similar to that of the Paris Convention.

**XIV. CONVENTION ON SUPPLEMENTARY COMPENSATION
FOR NUCLEAR DAMAGE (CSC),
done at Vienna on 12 September 1997 (not in force)**

27. Abbreviation used in the tables: CSC 97.

28. Scope: Global. The Convention envisages providing the availability of about 600 million Special Drawing Right (SDR) to compensate nuclear damage of one nuclear incident based on a two-tiered system of compensation to be equally ensured by the Installation State and through supplementary funds made up by contributions of all the CSC State Parties. The supplementary public funds apply to nuclear damage suffered in the territory of Contracting Parties, in or above their maritime areas beyond the territorial sea: (a) by a national of a Contracting Party; or (b) on board or by a ship flying the flag of a Contracting Party, or on board or by an aircraft registered in the territory of a Contracting Party, or on or by an artificial island, installation, or structure under the jurisdiction of a Contracting Party; or (c) in or above EEZ or its continental shelf in connection with the exploitation or the exploration of the natural resources. These funds are used only if an operator of a nuclear installation used for peaceful purposes (not military installations) situated in the territory of a Contracting Party to the CSC is liable and the courts of a Contracting Party have jurisdiction pursuant to either of the Vienna or Paris Conventions or national legislation in conformity with the annex. Contrary to the 1997 Protocol, the geographical scope is not extended to damage wherever suffered, since the supplementary funds will not apply to nuclear damage suffered in the territory of non-Contracting State Parties.

**XV. INTERNATIONAL CONVENTION ON THE ESTABLISHMENT OF AN
INTERNATIONAL FUND FOR COMPENSATION FOR OIL POLLUTION
DAMAGE (Fund Convention), done at Brussels on 18 December 1971
(in force since 1978)**

29. Abbreviation used in the tables: FUND 71.

30. Scope: Global. The Fund Convention aims to provide for a compensation system, supplementing that of the CLC Convention in order to ensure full compensation to victims of oil pollution damage caused by persistent oil spilled from laden tankers and to distribute the economic burden between the shipping industry and oil cargo interests. The Convention

provides for additional compensation to the victims of pollution damage in cases where compensation under the 1969 CLC was either inadequate or unobtainable. Under the Fund Convention, victims of oil pollution damage may be compensated beyond the level of the ship owner's liability. However, the Fund's obligations are limited so that the total payable to victims by the ship owner and the Fund shall not exceed 30 million SDR for any one incident. In effect, therefore, the Fund's maximum liability for each incident is limited to 16 million SDR. Where, however, there is no ship owner liable or the ship owner liable is unable to meet his liability, the Fund will be required to pay the whole amount of compensation due. With the exception of a few cases, the Fund will be obliged to pay compensation to the victims of oil pollution damage who are unable to obtain adequate or any compensation from the ship owner or its guarantor under the CLC. The Fund's obligation to pay compensation is confined to pollution damage suffered in the territories including the territorial sea of Contracting States. The Fund is also obliged to pay compensation in respect of measures taken by a Contracting State outside its territory. The Fund can also provide assistance to Contracting States, which are threatened or affected by pollution. It is, however, not obliged to indemnify the owner if damage is caused by his willful misconduct or if the accident was caused, even partially, because the ship did not comply with certain conventions. Contributions to the Fund should be made by all persons who receive oil by sea in Contracting States.

**XVI. PROTOCOL TO AMEND THE 1971 FUND CONVENTION,
done in London on 27 November 1992 (in force since 1996)**

31. Abbreviation used in the tables: FUND Protocol 92.

32. Scope: Global. Similar to the 1992 CLC Protocol, the Fund Protocol aims to increase compensation amounts and extend the scope of coverage to the EEZ and types of environmental damage. In addition, the 1992 Fund Protocol established a separate, 1992 International Oil Pollution Compensation Fund, known as the 1992 Fund, managed in London by a Secretariat, as with the 1971 Fund. Under the 1992 Protocol, the maximum amount of compensation payable from the Fund for a single incident, including the limit established under the 1992 CLC Protocol, is 135 million SDR. For both the 1971 and 1992 Funds are to be subscribed by cargo interests (annual contributions levied on the basis of anticipated payments of compensation and estimated administrative expenses during the forthcoming year).

Notes:

1/ “Although the compensation for some types of damage arising from continuous or synergic pollution may not be obtained by virtue of the rules, unless it was possible to establish a sufficient link with the activities of one or several operators, it was decided at the end that this one circumstance did not justify excluding non-accidental damage”. See Secretariat Memorandum prepared by the Directorate of Legal Affairs, CDCJ (89)60, Strasbourg, 8 September 1989, p. 6 para. 15.

2/ Council of Europe, Explanatory report on the Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Strasbourg, 1992) at 10, para. 40.

3/ See IOCP Working Group on this issue, FUND/WGR.7/21.

4/ Explanatory Report, ECE/TRANS/84, p. 17, para. 40; Lugano Explanatory Report, *supra* n. 2, at 9, para. 37.

5/ For instance, contamination of freshwater sources has occurred by leakage from petrochemical or other chemical plants and pipelines, fuel tanks at filling stations, whereas also groundwaters are vulnerable and contamination by spills of chemicals, uncontrolled release of jet fuel just before landing. A number of volatile chlorinated organic compounds are widely used in industry as solvents, degreasers and cleaning agents.

6/ For example environmental hazards to groundwater and surface freshwater relate to the unsecured disposal of hazardous materials that are often unidentified. This may include toxic chemicals buried in the area of the military base, although normally excluded under the relevant conventions.

7/ For example rivers that are significantly contaminated with microbes arising from municipal waste water and/or animal husbandry.

8/ For example cleaning of reservoirs. Such activities might lead to eutrophication, excessive accumulation of nutrients (phosphorus and nitrogen) or other substances to lakes and reservoirs causing an imbalance in the aquatic ecosystem resulting in contamination or pollution.

9/ This could involve human changes to the surroundings, such as the water retention potential of several of the flooded watersheds which are often reduced by human interventions, destruction of forests and riverine wetlands, engineering of mountain streams and rivers, destroying waterside vegetation, removing natural water-retention features and draining of agricultural land all reduced the absorptive capacity.

10/ Such as increased pollution of freshwater ecosystems by concentration of pollutants, regional extinction of animal species by the absence of biotopes in drought periods. Other consequences of drought could involve loss of crops, loss of animal stock, water supply problems: shortages and deterioration of quality, forest fires, wetland degradation, desertification, impacts on aquifers and other environmental consequences.

11/ A special reference was however made to cover rail motor-coach units and railcars, or hovercrafts operated on inland waterways, in which such packaged good might be transported.

12/ Subject to one important provision, namely that the national law is “in all respects as favourable to persons who may suffer damage as either the Paris or Vienna Conventions”. In other words, there may be cases, although probably few, in which CRTD could apply to damage arising from the carriage of nuclear substances.

13/ I.e. damage arising from carriage performed in a place to which member of the public do not have access, such as a plant or factory, provided that such carriage is accessory to, and an integral part of, the manufacturing process or industrial activity, irrespective of whether the damage arising from the carriage occurs within or outside the confines of the place where it is performed (art. 4(a), CRTD). Excluded is further the fuel necessary for the functioning of a vehicle from the definition of “dangerous goods”, but the Convention does apply in the event of damage being caused by residues in empty but un-cleaned tank vehicles, demountable tanks and tank containers or by hazardous wastes.

14/ Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention), done at Basel on 22 March 1989 (in force since 1992).

15/ Disposal is for example deposit into or onto land, release into sea/oceans including sea-bed insertion, etc.

16/ Rather than one definition of hazardous wastes, the Convention takes a broad view that there are 45 categories of wastes that are presumed to be hazardous in the Convention. 18 of them are waste streams (i.e. clinical wastes, mineral oils, PCB) and 27 others are wastes having clearly identified constituents (i.e. mercury, lead, asbestos, organic cyanides, halogenated organic solvents).

17/ List A/annex VIII that bans the export of wastes containing arsenic, lead, mercury, asbestos and many other chemical substances. A non-hazardous wastes list (list B/annex IX) exempts from the ban those wastes that can be safely recycled or re-used, including scarp iron, steel or copper, certain electronic assemblies, non-hazardous chemical catalysts, solid plastic wastes, paper and textile wastes.

18/ Compensation on a first tier is based on civil liability of the carrier, and is supplemented by a second tier, the HNS Fund financed by cargo interests.

19/ Decision of the Steering Committee of 11 April 1984 [NE/M(84)1] and Interpretation of the Steering Committee of 28 April 1987 [NE/M(87)1] in respect of Article 1(a)(ii) of the Paris Convention, and Interpretation of the Steering Committee of 8 June 1967 [NE/M(67)1] respectively. In addition, Contracting Parties can exclude installations being decommissioned from the application of the Paris Convention. Decision of the Steering Committee of 27 October 1977 [NE/M(77)2], Decision of the Steering Committee of 20 April 1990 [NE/M(90)1] in respect of Article 1(b) of the Paris Convention. Facilities that do not involve high levels of radioactivity will be covered by the general law. For example, facilities for uranium mining and milling and the physical concentration of uranium ores and installations, where only small amounts of fissionable materials are to be found, are not covered by the Convention.

20/ Article 2 of the Paris Convention. Such explicit permission to unilaterally extend the scope of application is not provided by the 1963 Brussels Supplementary Convention or the 1963 Vienna Convention.

21/ OECD Steering Committee Recommendations of 25 April 1968 [NE/M(68)1] and of 22 April 1971 [NE/M(71)1], respectively, in respect of Article 2; “The scope of application of the Paris Convention should be extended by national legislation, to damage suffered in a Contracting State, or on the high seas on board a ship registered in the territory of a Contracting State, even if the nuclear incident causing the damage has occurred in a non-Contracting State”.

22/ No formal decision was therefore made in respect of the coverage of “installations for the disposal of nuclear substances for the pre-closure phase” and “nuclear installations in the process of decommissioning”, so-called “sub-critical assemblies”, comparable to the Steering Committee's decision under the Paris Convention.

23/ The national legislation of the Installation State may exclude damage suffered in the territory of a non-Contracting State or in any maritime zone established by a non-Contracting State in accordance with international law of the sea, provided this non-Contracting State possesses a nuclear installation in its territory or maritime zone while not affording equivalent reciprocal benefits.

24/ The definition of nuclear damage is extended to include i) economic loss arising from personal injury or loss of property; ii) costs of measures of reinstatement of impaired environment if actually taken or to be taken, unless such impairment is insignificant; iii) certain loss of income resulting from a significant impairment of the environment; iv) costs of preventive measures; and v) further loss or damage caused by such measures, whereas the extent of recovery for such damage would be determined by the law of the competent court.

25/ The Protocol further extends the option of the Installation State to exclude, apart from small quantities of nuclear material, also certain nuclear installations from the application of the Convention, provided the criteria for such exclusion set by the IAEA Board of Governors are met.

26/ Applicable only to territorial damage, territorial sea damage, preventive measures.

27/ The Convention, however, applies in respect of the liability and jurisdiction provisions, to ships owned by a State and used for commercial purposes. The only exception as regards such ships is that they are not required to carry insurance.--