International Responsibility and Liability for Damage Caused by Environmental Interferences

by Johan G Lammers*

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3.2 Civil liability agreements

Other relevant international agreements deal with civil liability for such damage.

Let us first see for what activities such civil liability agreements have been concluded. Thereafter, we will proceed with an evaluation of the effectiveness of those agreements followed by a discussion of a number of positive developments.

First of all we may mention activities concerning the *peaceful use of nuclear energy*. At the beginning of the 1960s, two international instruments dealing with civil liability in that field were concluded. First, the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy (hereinafter referred to as the 1960 Nuclear Liability Paris Convention) adopted under the auspices of the European Nuclear Energy Agency, a semi-autonomous body within the Organization for Economic Cooperation and Development (OECD). In 1963 this Convention was supplemented by the Brussels Convention (hereinafter: 1963 Brussels Supplementary Nuclear Liability Convention), which provides for additional compensation drawn from public funds, *i.e.* of the State, where the harmful nuclear installation is located, and of the parties to the Brussels Convention collectively.

The second international instrument is the Convention on Civil Liability for Nuclear Damage (hereinafter: 1963 Vienna Nuclear Liability Convention) which was concluded in 1963 under the auspices of the International Atomic Energy Agency.

While only European countries are party to the 1960

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Paris Convention and the 1963 Brussels Supplementary Convention, partyship in the 1963 Vienna Convention is, in principle, open to all States. The Vienna Convention has been considerably amended in 1997 (hereinafter: the 1997 Amended Vienna Convention). At the same time a Convention on Supplementary Compensation for Nuclear Damage was concluded (hereinafter: the 1997 Vienna Supplementary Nuclear Liability Convention) which provides for a system of supplementary intergovernmental financing for the (Amended) Vienna Convention, the (Amended) Paris Convention or even a national system of compensation.

The 1960 Paris Convention and the 1963 Brussels Supplementary Convention are at the moment in a process of amendment, which will probably be completed at the beginning of 2001.

As a result of the conclusion in 1988 of the Joint Protocol relating to the Application of the Vienna Convention and the Paris Convention (hereinafter: 1988 Joint Paris-Vienna Nuclear Liability Protocol) a link has been established between the liability regimes of the Paris and Vienna Conventions, the principal effect of which is to treat the Parties to the Joint Protocol as if they were parties to *both* conventions.

For the sake of completeness, reference may further be made to the 1962 Brussels Convention on the Liability of the Operators of Nuclear Ships.

Another field of activity concerns the *exploitation of mineral resources from the seabed*. In response to the explosion of an oil rig off the coast of California near Santa Barbara in 1972 and the beginning of the exploitation of oil deposits in the North Sea, negotiations were started by coastal States of the North Sea leading in 1977 to the adoption of the International Convention on Civil Liability for Oil Pollution Damage resulting from Exploration and Exploitation of Seabed Mineral Resources.

In parallel with the negotiations on an agreement under international law, the oil industry reached agreement in September 1974 on a *private* strict liability regime to cover damage to a limited amount resulting from offshore installations, *i.e.* the Offshore Pollution Liability Agreement (OPOL). Of course, not only the peaceful use of nuclear energy or the exploitation of mineral resources from the seabed raise issues of civil liability. Such issues arise, in principle, with regard to all dangerous activities. From this perspective the 1993 Council of Europe Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment (hereinafter: 1993 Council of Europe Liability for Dangerous Activities Convention), which was concluded under the auspices of the Council of Europe, is in view of its broad scope particularly interesting.

The dangerous activities covered by the Convention comprise:

(a) certain activities involving dangerous substances, *i.e.* substances which constitute a significant risk for man, the environment or property (including in any event a number of substances mentioned in Annex I, Part A to the convention) and other substances specified in Annex I, Part B;
(b) certain activities involving genetically modified organisms posing a significant risk for man, the environment or property or involving micro-organisms posing such a risk;
(c) the operation of an installation or site for the treatment of wastes posing a significant risk for man, the environment or property; and the operation of a site for the permanent deposit of waste;
(d) provided all these activities are professionally performed.

Damage arising from carriage or caused by nuclear substances arising from an incident covered by the Paris and Vienna Nuclear Liability Conventions is not covered by the Convention.

An activity of particular importance also is *the maritime or other transport of dangerous substances or goods.*

The first international agreement in this field relates to the international maritime transport of oil. After the catastrophe of the oil tanker "Torrey Canyon" which sank near the British coast off Cornwall, the International Convention on Civil Liability for Oil Pollution Damage was concluded in Brussels in 1969 under the auspices of the International Maritime Organisation (IMO) (hereinafter: 1969 Oil Pollution Liability Convention). The Convention has been modified by additional protocols adopted in 1976, 1984 and 1992.

With a view to allowing for supplementary indemnification of pollution victims, an international fund was established by the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage concluded at Brussels in 1971 (hereinafter: 1971 Oil Pollution Fund Convention) with additional protocols of 1976, 1984 and 1992. Under the auspices of the IMO negotiations are presently taking place on a convention on compensation for pollution from oil in ships' bunkers, which will probably be adopted at a diplomatic conference to be held in March 2001. With regard to the maritime transport of nuclear material mention should further be made of the 1971 Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material.

Of course, not only the maritime transport of *oil or nuclear material* raises questions of civil liability. Of no less concern is the *maritime transport of other dangerous substances*.

Relevant in this connection is the International Convention on Liability and Compensation for Damage in connection with the Carriage of Hazardous and Noxious Substances by Sea (hereinafter: 1996 HNS Convention) adopted in London in 1996 under the auspices of the IMO.

The question of civil liability in the case of *transport of dangerous goods* is of *course not limited to the maritime area*. In this connection reference should be made to two other international instruments, *i.e.* the 1989 Geneva Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (hereinafter: 1989 Inland Carriage of Dangerous Goods Liability Convention) adopted under the auspices of the United Nations Economic Commis-

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sion for Europe (UN/ECE) and the recently adopted Basel Protocol of 1999 on Liability and Compensation for Damage resulting from Transboundary Movements of Hazardous Wastes and their Disposal (hereinafter: 1999 Basel Hazardous Wastes Liability Protocol) adopted by the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

In addition to the international instruments mentioned which really provide for a civil liability regime, a considerable number of conventions exist which contain a programmatic liability clause, *i.e.* a clause obliging the parties, in more or less stringent terms to cooperate in the formulation and adoption of appropriate rules and procedures with regard to liability and compensation for damage resulting from harmful environmental interferences.

In some cases this has indeed led to a concrete result such as the 1999 Basel Hazardous Wastes Liability Protocol.

In other cases this has led to lengthy international negotiations so far without result, such as the negotiations for an annex on liability for damage arising from activities taking place in Antarctica, while in other cases the negotiations have only recently started, such as in the case of damage caused by harmful environmental interferences concerning international watercourses.

Looking back over the past forty years there is less reason to be satisfied with the conclusion of civil liability agreements for environmental damage than one would at first sight be inclined to believe. In the first place there are certain agreements which have been concluded a long time ago and have never entered into force, nor is it realistic to believe that they will ever enter into force. This is the case with the 1962 Brussels Convention on the Liability of the Operators of Nuclear Ships and the 1977 International Convention on Civil Liability for Oil Pollution Damage resulting from Exploration and Exploitation of Seabed Mineral Resources. The 1988 Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) which contained provisions imposing civil liability for damage to the Antarctic environment as a result of Antarctic mineral resource activities is also a still-born child.

However, since under the 1991 Madrid Protocol on Environmental Protection to the Antarctic Environment all activities relating to mineral resources, other than scientific research, have been prohibited, the non-applicability of the civil liability provisions in respect of such activities is not problematic.

There are other, more recently, concluded international agreements which have not yet entered into force and for which the prospects of entry into force are not bright. This is the case with the 1989 Inland Carriage of Dangerous Goods Liability Convention. With regard to this Convention a questionnaire has been recently sent to the UN/ECE member States asking them, *inter alia*, why they have so far abstained from ratifying the Convention and what their opinion was about the various limits of liability (appropriate, too low or too high) and about the possible abandonment of the compulsory insurance obligation.

Another problematic convention is the already mentioned 1993 Council of Europe Liability for Dangerous Activities Convention. It is doubtful whether this convention will, if it enters into force at all – for which only ratification by three States is required – be widely ratified.

Certain States are firmly opposed to the Convention in view of its broad scope (due to *e.g.* broad definitions of damage, dangerous activities and environment), unlimited strict liability and alleged vagueness in a number of respects.

Other States, which are in principle sympathetic to the Convention, take a wait-and-see approach, making their final decision also dependent on the outcome of the discussion on the EU Commission's White Paper on Environmental Liability.

When we take a realistic look, we must confess that actually only the civil liability agreements concerning the maritime transport of oil and, with regard to the peaceful use of nuclear energy, the 1960 Paris Convention with the 1963 Brussel Supplementary Convention, the 1963 Vienna Convention and the 1988 Joint Protocol have entered into force and been widely ratified.

The 1997 Amended Vienna Convention will probably enter into force in a number of years. Whether this will be the case with the 1997 Vienna Supplementary Nuclear Liability Convention is more doubtful. The same can be said of the 1999 Basel Hazardous Wastes Liability Protocol which was concluded after years of extremely laborious negotiations. A positive fact with regard to this type of activity is, however, that all transboundary movements of hazardous wastes from OECD countries to non-OECD countries is prohibited under the Basel Convention regime, so that at least for those transboundary movements the issue of civil liability has lost much of its importance.

With regard to the 1996 HNS Convention, it can be said that at present only 8 countries have signed that Convention, while for its entry into force 12 ratifications are required of which 4 must be from States with not less than 2 million units of gross tonnage, with the additional requirement that the persons in those States which have to pay contributions to the Fund, established by the Convention, have during the preceding calendar year received an aggregate quantity of at least 40 million tons of hazardous substances contributing to the general account of the Fund.

While the foregoing survey shows that except in the case of the peaceful use of nuclear energy or the international maritime transport of oil and – if the 1996 HNS Convention enters into force – other hazardous and noxious substances, an effective international civil liability regime for environmental and other damage caused by dangerous activities is at present lacking, it should at the same time also be observed that a number of positive developments are taking place.

Concept of damage

First of all, it should be noted that the concept of "damage" for which compensation can be obtained under the civil liability agreements has in the last decade been con-

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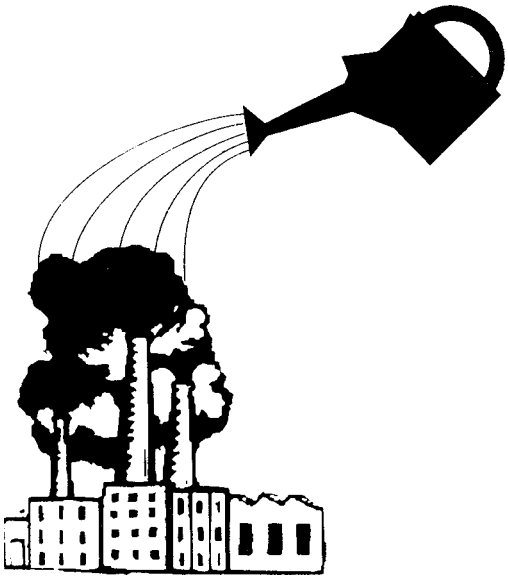
siderably broadened and in a manner which is definitely favourable from the viewpoint of protection of the environment.

For example, the 1960 Paris Nuclear Liability Convention uses a very narrow concept of nuclear damage for which compensation can be obtained, *i.e.* basically only for damage to or loss of life of any person, or for damage to or loss of property. While the precise scope of those notions may not be entirely clear and the competent court is entitled to determine in accordance with the applicable national law what is to be considered as damage to persons or property, it is at the same time also clear that economic and/or ecological damage not connected with loss of life or personal injury or loss of or damage to property is not covered by the present Paris Convention.

While the 1963 Vienna Nuclear Liability Convention similarly defines nuclear damage as "loss of life, any personal injury or any loss of, or damage to, property" it leaves more room for national courts to include other types of damage, *even unconnected with* damage to persons or property, "if and to the extent that the law of the competent court so provides". While the door is thus left open for courts to apply a broader concept of damage, the unified minimum concept of damage remains – as in the 1960 Paris Convention – a very narrow one.



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When we compare the concept of nuclear damage in the 1960 Paris Convention and the 1963 Vienna Convention with the definition of nuclear damage in the 1997 Amended Vienna Nuclear Liability Convention, we see, however, an enormous broadening of the concept of nuclear damage. Explicitly included are now also

- *the costs of measures of reinstatement of impaired environment*, unless such impairment is insignificant, if such measures are actually taken or to be taken, and
- *loss of income deriving from an economic interest in any use or enjoyment of the environment incurred as a result of a significant impairment of the environment,* and
- *the costs of preventive measures* and further loss or damage caused by such measures.

While the concept of nuclear damage is to include these items "to the extent determined by the law of the competent court", this proviso only relates to the extent, not to the very fact of the inclusion. This is contrary to the last item of damage mentioned in the broadened definition of nuclear damage in the 1997 Amended Vienna Convention which relates to "any other economic loss, other than any caused by the impairment of the environment, *if permitted* by the general law on civil liability of the competent court" (emphasis added).

The costs of reinstatement measures for which compensation may now be claimed include reasonable measures which have been approved by the competent authorities of the State where the measures were taken and which aim to reinstate or restore damaged or destroyed components of the environment, or to introduce, where reasonable, the equivalent of these components.

Compensation can now likewise be claimed for the costs of any reasonable measures undertaken after a nuclear incident has occurred to prevent or minimize nuclear damage. The broad concept of nuclear damage, adopted in the 1997 Amended Vienna Convention, now also allows for compensation of, for example, hotel owners for loss of income sustained as a result of a significant impairment of the environment (*e.g.* polluted beaches), even though they did not themselves sustain any injury to their person or physical damage to their property. It should, however, be kept in mind that even the enlarged definition of nuclear damage in the Amended Vienna Convention does not cover (full or residual) *pure ecological damage*, *i.e.* impairment of the environment which could not be prevented and in respect of which reasonable reinstatement measures (including equivalent measures) can not at all or not to the full extent be taken, hence *irreparable ecological damage*.

Although the process of amendment of the 1960 Paris Convention is not yet concluded, it is satisfying that the concept of nuclear damage in the amended convention will be largely similar to the broad concept of nuclear damage adopted in the Amended Vienna Convention.

The broad concept of damage in the 1997 Amended Vienna Convention and the future Amended Paris Convention on nuclear liability is symptomatic for the development of this concept in the last decade. Similarly broad definitions can be found in the 1989 Inland Carriage of Dangerous Goods Liability Convention, the 1996 HNS Convention, the 1993 Council of Europe Liability for Dangerous Activities Convention and the 1999 Basel Hazardous Wastes Liability Protocol.

All these instruments include loss of profit caused by impairment of the environment and the costs of reasonable measures of reinstatement aiming to reinstate or restore damaged or destroyed components of the environment, as well as the costs of preventive measures in the

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concept of damage for which compensation can be claimed. As in the Amended Vienna Nuclear Liability Convention and the future Amended Paris Convention pure ecological damage is, however, not included.

Only the concept of "pollution damage" in the 1969 Oil Pollution Damage Liability Convention and the 1971 Oil Pollution Fund Convention was defined in such a way that it could be argued that (full or residual) pure ecological damage could also be deemed to be included in the concept of damage for which compensation could be claimed. That broad interpretation was not undisputed and indeed it was the practice of the 1971 Fund to refuse compensation for pure ecological damage.

Thus, the Fund, for example, rejected a claim by the USSR for compensation for residual pure ecological damage in connection with a tanker incident in the Baltic Sea in 1979.[7] The USSR claimed compensation for a loss calculated under a statutory formula for residual water pollution.

Based upon the amount of oil spilled into the water, the quantity of water polluted with oil was calculated with reference to the dispersion characteristics of the oil and the resulting figure was multiplied by a statutory amount.

In another case, involving the Greek tanker "Patmos" which collided with a Spanish tanker off the coast of Italy, the Italian authorities not only filed a claim for the cost of clean-up measures, but also for an amount of £2.3 million sterling for ecological damage. In this case the Court of Appeal of Messina decided, however, that the owner of the tanker "Patmos" had to pay a sum of £830,000 to the Italian Government for ecological damage. That court henceforth accepted the broader interpretation of the concept of oil pollution damage in the 1969 Oil Pollution Liability Convention. The fact that affected beneficial uses of the marine environment, *e.g.* as a source of food, for recreation or scientific research were difficult to calculate was, according to the court, no reason to award no compensation. To calculate the compensation payable, the court resorted to principles of equity. It took, *inter alia*, as a basis the reduction in fish stocks calculated by experts on the basis of a mathematical formula.[8]

The definition of "pollution damage" in the 1992 Amended Oil Pollution Liability Convention and 1992 Amended Oil Pollution Fund Convention has, however, now been reformulated in such a way 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 undertaken or to be undertaken". Hence compensation will no longer be paid for pure ecological damage to the marine environment as a result of oil pollution damage, at least under the terms of the 1992 Amended Oil Pollution Liability Convention and 1992 Amended Oil Pollution Fund Convention.

As already indicated, none of the other civil liability agreements, even though equipped with a modern, enlarged definition of damage, allows for compensation of pure ecological damage.

It is my personal opinion that this is a deplorable situation.

The fact that ecological damage cannot for technical, environmental or even financial-economic reasons be repaired ought not be a justification for a polluter not to pay compensation for ecological damage – perhaps on a large scale – which he has indisputably brought about.

This, in fact, constitutes a premium on causing ecological damage of such a nature and to such an extent that it has become irreparable. Moreover, this situation is incompatible with the polluter pays principle, a principle included – though not in the strongest terms – in the 1992 Rio Declaration on Environment and Development and endorsed by the Organization for the Economic Cooperation and Development (OECD) and the European Union.

The fact that the calculation of irreparable ecological damage cannot take place on the basis of traditional parameters ought not to serve as a justification for not paying compensation either. Guidelines could be developed on the basis of which the damage could be computed in a reasonable and objective way. There is experience in the United States with this kind of calculation and the EC Commission has commissioned a study on this topic. In the context of the negotiations on an Annex on Liability to the Protocol on Environmental Protection to the Antarctic Treaty the matter is also being discussed. So there seems to be some progress on this issue.

Indeed, domestic courts have been able to calculate the amount of compensation to be paid in the case of irreparable physical human injury and it is difficult to see why computation methods could not be developed in order to determine the amount of compensation to be paid in the case of irreparable environmental damage.

Such compensation should then be paid to a fund from which measures for the protection of the environment in situations where preventive measures or reinstatement measures are feasible can be financed so that the compensation will be used for the benefit of environment protection.

Geographical scope

Another positive development concerns the *geographical scope* of the area within which damage will be eligible for compensation.

The 1997 Amended Vienna Convention now provides that it shall in principle apply to nuclear damage "wherever suffered". However, it allows the installation State to exclude in its legislation damage sustained in the territory of a non-contracting State or – except in respect of damage on board or to a ship or an aircraft – in any maritime zones established by such a State, but only in respect of a non-contracting State which has itself a nuclear installation in its territory or maritime zones *and* does not afford equivalent reciprocal benefits.

The 1960 Paris Nuclear Liability Convention does not apply to nuclear damage suffered in the territory of non-contracting States, unless otherwise provided by the legislation of the contracting party in whose territory the nuclear installation of the operator liable is situated. Indeed, it does not even apply to nuclear damage suffered in a contracting State or on the high seas on board a ship registered in the territory of a contracting State when this

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damage was the result of a nuclear incident taking place in the territory of a non-contracting State. By a recommendation adopted in 1971, the Steering Committee of the Paris Convention, however, recommended that national legislation should extend the coverage of the Paris Convention to such damage, even though the nuclear incident causing the damage had occurred in a non-contracting State.

The rule that damage suffered in the territory of a non-contracting State would in principle not be covered was somewhat attenuated as a result of the adoption of the 1988 Joint Protocol relating to the Application of the Vienna Convention and the Paris Convention. According to that Joint Protocol, nuclear damage sustained in a Vienna Convention country would be deemed to have occurred in a Paris Convention country in case a nuclear incident had taken place in a Paris Convention country and *vice versa*.

A positive development also can be seen with regard to the geographical scope of the future Amended Paris Convention,[9] although it will not go as far as the 1997 Amended Vienna Convention in this respect.

As in the 1960 Paris Convention nuclear damage suffered in the territory of a non-contracting State shall, in principle, not be covered unless otherwise provided for in the legislation of the contracting party in whose territory the nuclear installation of the operator liable is situated, but this time there are important exceptions to this basic approach. Apart from the case of the 1988 Joint Protocol already referred to and, of course, also applicable under the Amended Paris Convention, nuclear damage in a non-contracting State will now also be covered, if that State had at the time of the nuclear incident no nuclear installation in its territory or in any maritime zones established by it in accordance with international law. In this respect the Amended Paris Convention will also meet the concerns of non-nuclear States which often out of principle refuse to become a party to the Paris Convention, even when they could. A second important exception is that even damage in a non-contracting State, *which is a nuclear State*, will be covered on the condition, however, that that State had at the time of the nuclear incident nuclear liability legislation in force affording equivalent reciprocal benefits and based on principles identical to those of the Amended Paris Convention, including, *inter alia*, liability without fault of the operator liable. Here one should think especially of the United States, which is neither a party to the Paris Convention, nor to the Vienna Convention and is not expected to become a party.

An important difference with the Amended Vienna Convention remains that under the Amended Paris Convention nuclear damage sustained on the high seas – otherwise than on board a ship or aircraft registered by a contracting State or by the specific non-contracting States referred to above – or sustained on the international seabed area, will, in principle, not be covered. From an environmental point of view this is an important difference with the Amended Vienna Convention as it leaves the natural resources of the high seas and the international seabed area uncovered, which cannot but be deplored. The restriction originally appearing in the Paris Convention that the Convention would not apply to nuclear damage resulting from a nuclear incident occurring in the territory of a non-contracting State will, however, disappear.

A positive development regarding the geographical scope of application has also taken place in the civil liability agreements concerning maritime transport of oil and other hazardous and noxious substances. Thus, the 1969 Oil Pollution Liability Convention applied exclusively to pollution damage caused on the territory including the territorial sea (hence never more than 12 nautical miles from the coast) of a contracting State and to preventive measures taken to prevent or minimize such damage.

The 1992 Amended Oil Pollution Liability Convention, however, also applies to pollution damage caused in the exclusive economic zone of a contracting State, or, if a contracting State has not established such a zone, in an area designated by that State of similar size, *i.e.* extending possibly 200 nautical miles from the coast.

It is also important that the 1992 Amended Convention now explicitly provides that the Convention also applies to preventive measures *wherever taken* to prevent or minimize such damage. This broader approach is also followed in the 1996 HNS Convention with regard to damage caused by contamination of the environment and with regard to other damage caused by a substance carried on board a ship of a State party even anywhere else, excluding, however, the territory of a non-contracting State.

A rather restrictive approach is taken in the 1989 Inland Carriage of Dangerous Goods Liability Convention. Only damage sustained in the territory of a State party *and* caused by an incident occurring in a State party will be covered by the Convention as well as the cost of preventive measures wherever taken (hence also outside the territory of a State party) to prevent or minimize such damage.

The 1993 Council of Europe Liability for Dangerous Activities Convention has again a broader geographical scope. When the incident occurs in the territory of a party, the Convention shall apply *regardless of where the damage is suffered*. The Convention shall further also apply when the incident occurs outside the territory of a party and the conflict of law rules lead to the application of the law in force for the territory of a party.

The geographical scope of application of the 1999 Basel Hazardous Wastes Liability Protocol is very complicated, reflecting the extremely difficult and protracted nature of the negotiations and problems inherent in transport through contracting parties and non-contracting States. The Protocol shall apply to damage due to an incident during a transboundary movement of wastes and their disposal, including illegal traffic, from the point where the wastes are loaded on the means of transport in an area under the national jurisdiction of a State of export which is a party to the Protocol. However, such a State of export may exclude the application of the Protocol for such incidents which occur in an area under its national jurisdiction as regards damage in its area of national jurisdiction. In case of

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reimportation under Articles 8 or 9 of the Basel Hazardous Wastes Convention, the Protocol shall apply until the wastes again reach the original State of export.

The Protocol shall otherwise further apply until completion of the disposal operation. In principle, only damage suffered in an area under the national jurisdiction of a contracting party is covered. However, certain types of damage will also be covered when they occur in areas beyond any national jurisdiction. Unfortunately, loss of income as a result of impairment of the environment or costs of measures of reinstatement of the environment do not belong to the types of damage covered. Costs of preventive measures do, however, without qualification. It is also curious that damage suffered in an area under the national jurisdiction of a *transit* State which is not a contracting party is covered when such State appears on an annex listing mainly developing small island States *and* such a State has acceded to a multilateral or regional agreement concerning transboundary movements of hazardous wastes which is in force.

Further, in case of reimportation under Articles 8 or 9 of the Basel Convention the Protocol shall apply until the wastes reach the original State of export when the State of import, but not the State of export is a contracting party; the Protocol shall only apply with respect to damage arising from an incident which takes place after the disposer has taken possession of the wastes. When the State of export, but not the State of import is a contracting party the Protocol shall apply only with respect to damage arising from an incident taking place before the disposer takes possession of the wastes. When neither the State of export nor the State of import is a contracting party, the Protocol shall not apply.

It may be wondered whether the exclusion from the (geographical) scope of civil liability agreements of damage in the territory or other areas under the national jurisdiction of non-contracting States or in areas beyond the limits of national jurisdiction, where such damage would be covered elsewhere, is justifiable. It is my personal view that the answer should, in principle, be no. First of all, of course, from the perspective of promoting protection of the environment through the instrument of imposing liability, but also from the perspective that effect should be given to the principle that the polluter must pay for the damage caused. If the view is taken that the civil liability agreements entail certain benefits which normally should not be available to the victims – in my view a controversial approach – damage caused to victims of non-contracting States should in any event be covered when those States afford equivalent reciprocal benefits, as is now recognized in the 1997 Amended Vienna Nuclear Liability Convention. The same should apply in respect of damage sustained by nationals of a non-contracting State, if not by everybody, in areas beyond the national jurisdiction of any State. Naturally, the condition of equivalent reciprocal benefits cannot – and in my view should not – apply to pure ecological damage occurring in areas beyond national jurisdiction, but as we have seen such damage is so far nowhere included in present civil liability agreements.

Channelling of liability

Another positive aspect of the international civil liability agreements is that the liability envisaged in the agreements is channelled to a particular person, so that the victims know against whom to direct their claim for compensation. In the nuclear civil liability conventions this is exclusively the operator of the nuclear installation which created the risk, who has, moreover, in principle, no right of recourse to third parties. This does not only facilitate the bringing of claims by victims, but has as an additional advantage that only one person will be required to have and maintain insurance in a market with limited insurance capacity.

In the 1993 Council of Europe Liability for Dangerous Activities Convention the liable person is the operator, *i.e.* the person who exercises the control of a dangerous activity, without prejudice, however, of any right of recourse of the operator against a third party. In the conventions on liability for oil pollution damage or for damage caused by other hazardous and noxious substances during maritime transport it is the owner of the ship at the time of the incident; while in the 1989 Inland Carriage of Dangerous Goods Liability Convention the liable person is the carrier at the time of the incident, in all these cases, however, without prejudice to any right of recourse of the liable person against a third party.

The 1999 Basel Hazardous Wastes Liability Protocol imposes, however, strict liability, in principle, on the notifier of the transboundary movement of the waste (usually the generator or the exporter of the waste), until the disposer has taken possession of the waste, whereafter the disposer will be the liable person. Yet, in addition to the strict liability imposed on the notifier or disposer, the Basel Protocol imposes fault-based liability on any person for damage caused or contributed to by his lack of compliance with the provisions implementing the Basel Convention or by his wrongful intentional, reckless or negligent acts or omissions.

Strict liability

A highly important positive aspect of the civil liability agreements is that the liability imposed is, in principle, not fault-based, but *strict* liability. It means that the person to whom liability is channelled will be liable once the victims have proved that they have sustained damage covered by the agreement and that this damage is caused by the incident for which that person incurs liability under the agreement. No proof of any fault on the part of that person or of any other person is therefore required.

Limited number of exoneration grounds

Thus, the operator of a nuclear installation will escape liability in only very limited situations which serve as grounds for exoneration, and the burden of proof that such a situation exists also rests on him. In the case of the 1997 Amended Vienna Nuclear Liability Convention no liability shall attach to the operator if he proves that the nuclear damage is directly due to an act of armed conflict, hostilities, civil war or insurrection. The grounds for exonera-

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tion of a serious natural disaster of an exceptional character appearing in the original 1963 Vienna Nuclear Liability Convention were not taken over into the 1997 Amended Vienna Convention and will probably not appear in the future Amended Paris Nuclear Liability Convention. An additional ground for exoneration exists when the nuclear damage results wholly or partly either from the gross negligence of the victim or from an act or omission of the victim done with the intent to cause damage. This, however, only applies when the law of the competent court so provides.

Limited exoneration grounds – though not so limited as in the case of the nuclear liability conventions – are also found in civil liability agreements concerning maritime transport of oil or other hazardous or noxious substances. In those conventions a natural phenomenon of an exceptional, inevitable and irresistible character, or the fact that the damage was wholly caused by an act or omission done with the intent to cause damage by a third party may also serve as an exoneration ground as well as negligence or other wrongful act of any government or other authority responsible for the maintenance of lights or other navigational aids in the exercise of that function. Failure to provide information to the owner of the ship under the 1996 HNS Convention or to the carrier under the 1989 Inland Carriage of Dangerous Goods Liability Convention concerning the dangerous nature of the substances or goods also serves as an exoneration ground. The fact that the damage resulted necessarily from compliance with a compulsory measure of a public authority is an additional exoneration ground found in the 1999 Basel Hazardous Wastes Liability Protocol and the 1993 Council of Europe Liability for Dangerous Activities Convention, which latter convention also mentions as exoneration grounds that the damage was caused by pollution at tolerable levels under locally relevant circumstances or was caused by a dangerous activity taken lawfully in the interest of the person who suffered the damage.

The channelling of liability to a particular person and the imposition of strict liability in the civil liability agreements, with a limited number of exoneration grounds, the existence of which must moreover be proved by the liable person, has led to a considerable strengthening of the position of the victims of environmental interferences. To this may be added the tendency in recent agreements or amendments of the older ones to broaden considerably the concept of damage covered by the agreements concerned.

Limitation of liability in amount

These positive aspects, however, also have a certain price. Thus, with the notable exception of the 1993 Council of Europe Liability for Dangerous Activities Convention, all civil liability agreements limit the strict liability or allow for the limitation of such liability of the liable person for damage arising from any one incident to a certain amount, usually expressed in SDRs, *i.e.* special drawing rights as defined by the International Monetary Fund. Such limitations do not exist, when it is possible – in the case of the nuclear liability conventions only to a very limited extent – to hold a person liable for intentional, reckless, or sometimes even negligent conduct, but in that case the burden of proof is on the victim. The adequacy of any limited liability system highly depends, of course, on the extent of the limited amounts available for compensation and the possibility of increasing those amounts when needed.

Under the 1960 Paris Convention the maximum liability of the operator is in principle only 15 million SDRs, an amount which (taking into account the operators' options for obtaining insurance or other financial security) could be increased or even decreased by national legislation to an absolute minimum of only 5 million SDRs. Such a decrease is also possible having regard to the nature of the nuclear installation or the nuclear substances involved and to the likely consequences of an incident originating therefrom, but in that case an OECD Council Recommendation adopted in November 1982 recommended contracting parties to the Paris Convention to take steps to make available public funds to make up for the difference with 15 million SDRs.

The levels of operator liability established by the contracting parties to the Paris Convention vary considerably. According to data available in March 1999, the standard liability per November 1998 was, for example, 80 million SDRs for Belgium, 75 million SDRs for France – a major nuclear installation country – 215 million SDRs for Germany (indicating the maximum amount of financial security, because in Germany the liability of the operator for damage occurring in Germany is, in principle, unlimited), 5 million SDRs for Italy, 285 million SDRs for the Netherlands, 175 million SDRs for Sweden and 165 million SDRs for the United Kingdom, a situation which especially in the case of Belgium and France is extremely disappointing, having regard also to the fact that the Nuclear Energy Agency (NEA) Steering Committee recommended the parties to the Paris Convention to adopt a maximum liability of the nuclear operator of not less than 150 million SDRs.

Under the 1963 Vienna Convention the liability of the operator could be limited to not less than US$5 million for any nuclear incident (the value of the US$ expressed in terms of gold on 29 April 1963, that is to say US$35 per one troy ounce of fine gold).

After the Chernobyl incident in 1986 it became clear that the amounts for compensation in the Vienna and Paris Nuclear Liability Conventions had become completely outdated and a considerable increase of those amounts was called for. Under the 1997 Amended Vienna Convention the maximum liability of the operator for any one nuclear incident has, in principle, been set at "not less than 300 million SDRs", or to "not less than 150 million SDRs" provided that the difference, of at least 300 million SDRs, is made available by public funds of the installation State. As a transitional measure, it is, however, possible for a maximum of 15 years from the date of entry into force of the Amended Vienna Convention to set the maximum liability of the operator at "not less than

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100 million SDRs" or even below that amount provided the difference is made up by public funds of the installation State.

The amendment of the 1960 Paris Nuclear Liability Convention is not yet completed, so definitive figures cannot yet be given. Most contracting parties favour, however, an increase in the standard maximum liability of the operator to at least 600 million SDRs (with only one party favouring 450 million SDRs), again with a possibility of a transitional amount of not less than 50 per cent of that amount (*i.e.* 300 (or 225) million SDRs). A transitional amount lower than 50 per cent of the standard maximum liability amount may also be established, provided that public funds shall be made available by the contracting party to compensate nuclear damage between that lesser amount and the 50 per cent of the standard maximum liability amount.

Under the present Paris Convention the maximum amount of liability of the operator for compensation does not include any interest and costs awarded by a court in actions for compensation under the Convention. These interests and costs must be paid by the operator in addition to the sum for compensation for which he is liable under the Convention. During the negotiations to amend the Paris Convention the question has, however, come up whether so-called external claims handling costs (*i.e.* litigation costs, expert witness fees, *etc.*) should become part of the maximum amount of liability of the operator.

This question is important as it is clear that such claims handling costs can form a substantial part of the maximum amount of liability which will not become available for compensation for damage.

To reach agreement on the amount of liability that should be available for compensation is always one of the most problematic issues in the negotiations. Of course, a compromise must be reached between the interests and the financial capability of the liable person on the one hand and the requirement that an adequate amount will be available for the compensation of victims on the other hand.

Security for liability

There is, however, another independent factor which plays a role in the negotiations on the maximum amount of liability of the liable person, i.e. the possibility of obtaining insurance or other financial security for the payment of that amount. This problem exists, in particular, with regard to obtaining insurance for liability for nuclear damage. Due to the size of the risk involved, the limited number of nuclear installations, and lack of experience with nuclear incidents, insurers have difficulty in assessing their risk and are henceforth only willing to accept insurance for limited amounts.

Under the nuclear civil liability conventions the operator of the nuclear installation is required to have and maintain insurance or other financial security to the extent of his maximum liability. The installation State is (in the Vienna Convention and the Amended Vienna Convention) or will (in the future Amended Paris Convention) be obliged to ensure the payment of the claims for compensation to the maximum amount of the liability of the operator to the extent that the insurance or other financial security is inadequate.

With the exception of the 1993 Council of Europe Liability for Dangerous Activities Convention, the other civil liability agreements also oblige the liable person to provide for insurance or other financial security or make the right of the liable person to benefit from a limitation of liability dependent on such insurance or financial security.

Courtesy: Süddeutsche Zeitung

The 1993 Council of Europe Convention, as already noted, does not provide for maximum liability amounts. With regard to the maintenance of insurance or other financial security, it is non-committal as it only provides that "Each Party shall ensure that *where appropriate*, taking due account of the risks of the activity, operators are required to participate in a financial security scheme or to have and maintain a financial guarantee up to a certain limit of such type and terms as specified by internal law, to cover the liability under this Convention" (Article 12) (emphasis added).

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Priority of claims

The fact that the liability of the liable person is limited naturally implies that the total amount of damage may exceed the maximum amount available for compensation. In such a case there will be a need to apportion the claims and the question will arise whether certain categories of claims should take priority over other categories.

The 1960 Paris Nuclear Liability Convention and the 1963 Vienna Nuclear Liability Convention left the equitable distribution of the compensation to be regulated by the law of the competent court and did not prescribe any priority among the various types of claims. The same approach is followed in the 1999 Basel Hazardous Wastes Liability Protocol.

The 1997 Amended Vienna Nuclear Liability Convention deviates from this approach and now provides that – subject to certain limitations – priority in the distribution of the compensation shall be given to claims in respect of loss of life or personal injury. Although the matter was extensively debated, the future Amended Paris Convention will most probably not follow the Amended Vienna Convention on this point.

Certain other conventions provide for a special position of claims for loss of life or personal injury in another way, such as the 1989 Inland Carriage of Dangerous Goods Liability Convention, which establishes different liability limits, *i.e.* a separate higher limit for claims for loss of life or personal injury and another limit for other claims, with even the possibility for excess claims of the first category to share in the distribution of the amount available for the second category.

In the 1996 HNS Convention, claims in respect of death or personal injury have priority over other claims except to the extent that the aggregate of such claims exceeds two-thirds of the total amount available for compensation under the convention.

The 1969 Oil Pollution Liability Convention and its amended version of 1992 simply provide that the available amount "shall be distributed among the claimants in proportion to the amounts of their established claims", which is understandable in view of the nature and limited definition of "pollution damage" in that (amended) convention.

Limitation of liability in time

The price for channelling of liability to a particular person and the imposition of strict liability does not only consist of the limitation of the compensation to a maximum amount, but also of a considerable reduction of the period of time within which claims for compensation can be brought.

Thus, under the 1960 Paris Nuclear Liability Convention and the 1963 Vienna Nuclear Liability Convention claims for compensation had to be brought within 10 years from the date of the nuclear incident. National legislation could establish longer periods if measures had been taken to cover the liability of the operator for such longer period, but such extension could in no case affect the right of compensation of a person who had brought an action in respect of loss of life or personal injury against the operator before the expiry of the 10-year period. National legislation could, moreover, establish a shorter period than ten years for the extinction of the right of compensation, *i.e.* not less than two years under the Paris Convention or not less than three years under the Vienna Convention from the date at which the person suffering the damage had knowledge, or from the date at which he ought reasonably to have known, of both the damage and the operator liable, provided that the period of ten years or longer as provided by national law would not be exceeded.

A positive development is that in the 1997 Amended Vienna Convention and probably also in the future Amended Paris Convention the extinction or prescription period for actions with respect to loss of life or personal injury has been increased from 10 to 30 years. Such actions may further even exceed 30 years and actions for other damage ten years when national law so provides. It remains, however, to be seen whether these increases of extinction or prescription periods will be of much consequence, with regard to the fact that the Amended Vienna Convention provides that claims brought after a period of 10 years from the date of the nuclear incident will in no case affect the rights of compensation of any person who has brought his action before the expiry of the 10-year period, or the fact that the future Amended Paris Convention will probably provide that claims with extended extinction or prescription periods shall in no case affect the right of compensation of any person who has brought an action against the operator within a 30-year period in respect of personal injury or loss of life, or within a 10-year period in respect of all other nuclear damage.

The future Amended Paris Convention will probably further follow the Vienna Convention in extending the period which may be established by national law for prescription or extinction from the date at which the person suffering nuclear damage had knowledge, or ought reasonably to have known, of both the nuclear damage and the operator liable, from not less than two years to not less than three years.

Other civil liability agreements also provide for reduced periods of prescription or extinction of actions for compensation, usually three years and sometimes five years (the 1999 Basel Protocol) from the date the claimant knew or ought reasonably to have known of the damage and of the identity of the liable person and an absolute period of time of six or 10 years from the date of the incident which caused the damage. Only the 1993 Council of Europe Liability for Dangerous Activities Convention has kept a long absolute limitation period, *i.e.* 30 years from the date of the incident.

Supplementary or subsidiary funding

The fact that the maximum amount liability of the liable person may not be enough to cover all the damage has led to the creation of a number of supplementary funding schemes or mechanisms. The most well-known is, of course, the 1963 Brussels Convention Supplementary to the 1960 Paris Nuclear Liability Convention. That Con-

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vention provides in its present form for a second tier of compensation out of public funds to be made available by the installation State (*i.e.* an amount between at least 5 million SDRs and 175 million SDRs) and for a third tier out of public funds to be made available collectively by the contracting parties to the Brussels Convention (*i.e.* an additional 125 million SDRs) so that in total a coverage of 300 million SDRs is created. As a consequence of the amendment of the 1960 Paris Nuclear Liability Convention, the Brussels Supplementary Convention is at present also being revised.

No supplementary funding mechanism existed for the 1963 Vienna Nuclear Liability Convention. However, a positive development is that together with the 1997 Amended Vienna Convention agreement was also reached on a Convention on Supplementary Compensation for Nuclear Damage. This Convention has as its object to provide for further compensation out of public funds above the compensation available under the 1963 Vienna Convention or 1997 Amended Vienna Convention, or the 1960 Paris Convention or the future amended version thereof, or under a national system of compensation such as that of the United States, which is not a party to the 1960 Paris Convention or the 1963 Vienna Convention and will not become a party to those conventions or their amended versions in the future.

According to this convention the installation State shall ensure the availability (either through liability of the operator or out of its own public funds) of at least 300 million SDRs for compensation in respect of nuclear damage per nuclear incident, or by way of a transitional measure for a period of 10 years from the date of the opening for signature of the convention an amount of at least 150 million SDRs. Beyond these amounts the contracting parties will collectively provide an additional amount out of public funds, whereby the contribution of each contracting party is with certain qualifications and caps basically for the most part determined by the installed nuclear capacity of that contracting party and to a small extent by the United Nations rate of assessment for that party.

A supplementary or subsidiary funding scheme also exists in the case of maritime oil transport in the form of an international fund for compensation for oil pollution damage established by the 1971 Oil Pollution Fund Convention and replaced in 1992 by the International Oil Pollution Compensation Fund Convention designed to cover oil pollution damage that is not covered by the Oil Pollution Liability Convention because it goes beyond the ship owner's maximum liability or because the liability requirements of the Oil Pollution Liability Convention are not satisfied or because the owner is financially unable to discharge his liability.

The contributions to the Fund – *i.e.* an initial contribution plus annual contributions – are paid by the oil industry and are dependent on the quantities of oil received in the territory of contracting States to the 1971 and later 1992 Fund Convention. The comprehensive system of liability and compensation for oil pollution damage created by the 1992 amendment of the 1969 Oil Pollution Liability Convention and the 1971 Oil Pollution Fund Convention led to the discontinuation of certain voluntary agreements made between the oil industries to supplement those conventions, *i.e.* the 1969 Tankers Owners' Voluntary Agreement Concerning Liability for Oil Pollution (TOVALOP standing Agreement), the 1987 Supplement TOVALOP Agreement, and the 1971 Contract Regarding an (Interim) Supplement to Tanker Liability for Oil Pollution (CRISTAL).

The 1996 HNS Convention also creates a Fund (the HNS Fund) which has as its aim to provide compensation for damage in connection with the carriage of hazardous and noxious substances by sea to the extent that such damage is not covered by the liability of the ship owner. Contributions – initial and annual – to the Fund are to be paid by cargo receivers and are dependent on the quantity and type of the contributing cargo received in the territory of the contracting parties.

Under the 1999 Basel Hazardous Wastes Liability Protocol additional and supplementary measures aimed at ensuring adequate and prompt compensation may be taken using existing mechanisms where compensation under the Protocol does not cover the "costs of damage". The need for and possibility of improving existing mechanisms or establishing a new mechanism is to be kept under review by the Meeting of the Parties. The prospects for the establishment of a new mechanism, however, appear to be minimal.

Jurisdiction and enforcement of judgments

An important matter normally also dealt with in civil liability agreements is the question of the competent court and of the recognition and enforcement of decisions given by that court by and in other contracting parties.

First of all there should not be uncertainty as to which court or courts would be competent to hear claims for damage covered by the international agreement.

Considerations of practicability and fairness may then lead to the designation of the court of a contracting State at the place where the damage was sustained or where the incident occurred or where preventive measures were taken or, in certain agreements, where the defendant has his habitual residence or principal place of business, or where the ship is registered or of which it is entitled to fly the flag. This may, in practice, lead to a situation where more than one court could be a competent court.

However, since the liability of the liable person is usually restricted to a certain maximum and the total amount of recognized claims may well exceed that amount, the problem of apportionment will arise. In such cases only one court should be the competent court and all actions for compensation should only be brought before that court. Accordingly, the 1960 Paris Nuclear Liability Convention and the 1963 Vienna Nuclear Liability Convention and the amended versions thereof provide for a system according to which always only one court will be the competent court. This may be the court in whose territory the nuclear incident occurred, or – a new element in the amended conventions – the court of the country in whose

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exclusive economic zone or equivalent zone the incident occurred; or the court of the contracting party in whose territory the nuclear installation of the operator liable is situated or in any other case, in the Paris Nuclear Liability Convention the court of the contracting party determined by the European Nuclear Energy Tribunal, or in the case of the Vienna Nuclear Liability Convention the court determined by agreement between the contracting parties whose courts would be competent.

Where in other civil liability agreements more than one court may be competent to deal with claims for compensation, such agreements normally provide that at least one court shall be exclusively competent to determine all matters relating to the appointment and distribution of the amount available for compensation or provide at least for a system facilitating consolidation of related actions at one court. An important element in the provisions on competent courts in many conventions is an explicit obligation on the part of each contracting party to ensure that its courts possess the necessary competence to entertain claims for compensation under the agreement.

As already noted, there is not only a need to agree on competent courts, but also to agree on the recognition and enforcement of a judgment given by a competent court in all other contracting parties of a given agreement. All civil liability agreements contain provisions for such recognition, which may be refused only on a few grounds, and for the subsequent enforcement of a recognized judgment, the formalities for which may never involve a reopening of the merits of the case.

4. Concluding remarks

Responsibility and liability are potentially important supplementary instruments to promote compliance with norms designed to protect the environment, to enhance the implementation of the precautionary principle and to promote prevention of environmental interferences. They are also indispensable instruments to give effect to the polluter pays principle and to restore the balance by requiring the cessation of a wrongful act or reparation in the case of a breach of a legal obligation to protect the environment or even in the absence of such a breach.

International responsibility and liability may in this respect play a role at the level of States in public international law, may take the form of State responsibility for a breach of an international obligation or (at least in theory) State liability for risk for inherently dangerous but not necessarily unlawful activities.

State responsibility will entail for the wrongdoing State an obligation to make full reparation for the internationally wrongful act in the form of restitution, compensation or satisfaction.

For various reasons it will, however, often be far from easy to hold another State effectively responsible for a breach of a norm of international environmental law. The injured State has the burden of proof that the responsible State has breached an international obligation. Such an obligation is usually a due diligence or due care obligation and, moreover, is often phrased in rather soft terms.

Apart from that, the existence of a causal link between the author of the damage and the damage itself must also be established, which in the case of certain types of environmental interferences such as ozone depletion and climate change may create great problems.

State liability for risk in the case of inherently dangerous activities, which need not necessarily be unlawful or the unlawfulness of which need not be proved, unfortunately until now has hardly found support in State practice.

Within the framework of European Community law the Court of Justice in Luxembourg can play an important role in the enforcement of European environmental law. Member States of the European Union that are in breach of Community environmental law may in the end even face penalty payments imposed on them by the Court. An effective directive imposing strict liability on member States or natural or legal persons for damage caused by environmental interferences is, however, still lacking.

With regard to the responsibility and liability of natural and legal persons mention should further be made of many international agreements providing (mostly) for civil liability for damage caused by environmental interferences connected with the peaceful uses of nuclear energy, the exploitation of mineral resources from the seabed, more general activities dangerous to the environment, or the maritime or other transport of dangerous substances or goods.

However, of those agreements only those concerning liability for damage caused by the peaceful uses of nuclear energy or the maritime transport of oil have been widely ratified.

Yet, there is growing international pressure to enter into negotiations to conclude such civil liability agreements, *e.g.* with regard to the Antarctic environment, the waters of international watercourses or in the field of biosafety.

Positive elements in the development of such agreements are a broadening concept of damage for which compensation may be claimed, a broadening geographical scope, channelling of liability to a particular liable person, strict, *i.e.* no fault liability with a limited number of exoneration grounds, and financial security for liability. Certain disadvantages are limitation of liability in amount and in time. The limitation of the liability of the liable person is, however, again in part compensated for by supplementary or subsidiary funding mechanisms.

Notes:

[7] See R. Wolfrum and Ch. Langenfeld, *Environmental Protection by Means of International Liability Law*, Berlin, 1999, p. 16.

[8] *Ibid.*, p. 17.

[9] See the revision of the 1960 Paris Nuclear Liability Convention, OECD/NEA Doc. NEA/LEG/CPPC(98)10/REV. 10 of 9 November 2000.

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