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PRIVATE OR INTERNATIONAL LIABILITY FOR TRANSNATIONAL ENVIRONMENTAL DAMAGE— THE PRECEDENT OF CONVENTIONAL LIABILITY REGIMES

Günther Doeker and Thomas Gehring***

In spring 1989 the oil carrier 'Exxon Valdez' ran aground off the Alaskan coast and caused a major oil spill entailing high clean-up costs as well as losses to fishing and related industries. The incident demonstrated anew the growing risk of environmental damage inherent in modern industrial activity and emphasized the need for applicable rules governing liability for transnational environmental damage.

Conventional (i.e. treaty-based) regimes play an important role in the current discussion on international liability for transnational environmental damage. In order to assess their value as precedents for the development of applicable general rules regarding transnational liability, this article analyses the interest of states in the process of regime-creation and the economic and historical background that has heavily influenced the liability regimes themselves.

I. Liability for Risk

Traditionally, claims for compensation of transnational environmental damage had to be based on the concept of state responsibility and, more precisely, on the rule of due

* LLM, PhD, Professor, Free University of Berlin

** Dipl Pol, Doctorial Candidate, Free University of Berlin
Permanent Address: Ihnestr 22, D-1000 Berlin 33, West Germany

Abbreviations: CRISTAL = Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution; HNS = Hazardous and Noxious Substances; IAEA = International Atomic Energy Agency; IMC = International Maritime Committee; IMCO = Intergovernmental Maritime Consultative Organization; OECD = Organization of Economic Co-operation and Development; OEEC = Organization of European Economic Co-operation; OPOL = Offshore Pollution Liability Agreement; P& I = Protection and Indemnity; TOVALOP = Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution; UN = United Nations; UNIDROIT = Institut international pour l'unification du droit privé; USAEC = United States Atomic Energy Commission.

diligence. It is accepted that liability exists for failure to observe international obligations but the doctrine leaves many questions unanswered. For example, before states become responsible for damage caused to other states customary international law requires that there be a breach of an established international obligation. It is frequently difficult, in the absence of clear and binding obligations established by treaty, to determine that any obligation exists in a particular case. The doctrine of state sovereignty over territory and the resources therein has predominated. Even if an obligation can be evidenced or implied, such as a duty to take care in carrying out certain activities, states may be held liable only if they are negligent, i.e. at fault in failing to observe the standard of care required (due diligence). These standards are frequently hard to identify or vaguely expressed, or their legal status may be controversial if they are formulated in terms of 'guidelines' or 'codes of conduct'. Attribution to states of failures to act on the part of their state organs or officials also poses problems.

It is, moreover, not yet clear, in the absence of treaties, that states can be held absolutely or strictly liable for their damaging activities, even if they engage in ultra-hazardous enterprises, or those with a forseeable risk of damage, such as operating nuclear or other power stations, using ships to transport oil and other hazardous or noxious cargoes, disposing of toxic wastes, exploiting seabed resources or outer space etc.

In spite of the increasing number of cases of transnational environmental damage, compensation thus is in fact paid only very rarely. Furthermore, payment is normally based not on customary international law but on regimes for certain specific areas of transnational pollution established by liability conventions or it is paid 'ex gratia'[1] i.e. without acceptance of the formal obligation to compensate.

Partly this might be due to the vagueness of customary law as outlined above. An increasing amount of industrial activity has escaped the rule of due diligence,[2] as advanced technological development involves a huge amount of risk for accidental transnational environmental damage. The risk inherent in complex industrial processes can be minimized but not completely avoided.[3] As long as a breach of a rule of international law is a necessary prerequisite for a claim of compensation, the source activity has to be classified as prohibited by international law, entailing the consequence that it may not be continued legally.[4] It is, however, a general concern of states to avoid exactly this consequence for activities they consider necessary, or at least profitable, for their economies. Therefore, states normally avoid accepting the obligation to pay compensation for transnational environmental damage.

Consequently, the economic costs of dangerous activities are externalized. Some scholars emphasize the distribution of wealth as the primary objective of liability and hold that an externalization of costs is a deprivation of rights and amenities of the victim

[1] See Rudolf, 'Haftung für rechtmäßiges Verhalten im Völkerrecht', *Festschrift für Otto Mühl*, Stuttgart 1981, 551–2.

[2] See however Caubet, 'Le Droit international en quête d'une responsabilité pour les dommages résultants d'activités qu'il n'interdit pas', *Annuaire Français de Droit International* 1983, 99, trying to stay within the realm of state responsibility. He distinguishes between the internationally lawful conduct itself and the wrongful transboundary harm caused by this conduct.

[3] See Roßnagel, 'Die rechtliche Fassung technischer Risiken', *Umwelt- und Planungsrecht* 1986, 46 and Quentin-Baxter, 'First Report on International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law', *International Law Commission, Yearbook* 1980, para 38.

[4] See Magraw, 'Transboundary Harm: The International Law Commission's Study of "International Liability" ', *American Journal of International Law* 1986, 318.

in favour of the benefit of the risk-creator.[5] Others focus on the preventive function of an increased obligation to compensate transboundary environmental damage[6] and imply that the risk-creator will invest additional resources in preventive measure when costs of accidental pollution are internalized. Both arguments require liability to be strengthened. The burden of proof should no longer rest on the victim. In other words, the traditional system of fault-liability should be replaced by one of strict or absolute liability[7] at least for so-called 'ultra-hazardous'[8] activities.[9]

Several authors believe that the concept of international liability should be developed on the basis of establishing a general obligation of strict or absolute liability for environmental damage as a primary rule on international law.[10] Apart from the general desirability of strengthened liability for environmental damage, on what evidence, however, is this theory founded?

First of all, its proponents produce several prominent cases of international dispute settlement. These are, however, only of doubtful value regarding the development of a general obligation to strict international liability.[11] More importantly, it remains to be proved that 'a few partly isolated and hardly representative'[12] decisions of international tribunals rendered in specific political situations in the field of environmental disputes provide an appropriate basis from which to derive legal norms capable of influencing today's political decision-makers. For 'the interests and aims of States ... explain why particular rules and principles are created and why they are (or are not) carried out'.[13]

Secondly, an increasing amount of international conventions governing third-party-liability in specific fields seems to corroborate this theory. It is true that all these conventions are based on the principle of strict and absolute liability and thus avoid the necessity of proving the breach of a rule of international law prior to a claim for compensation. Not all of them, however, are concluded in order to tighten the legal remedy for the benefit of victims. And not all of them contain an obligation of *international* liability (i.e. liability *between states*).

No doubt, international conventions reflect the intention and the view of political decision-makers in a much more realistic way than do isolated court decisions. They establish detailed regimes intended generally to govern liability disputes in the specified field. They are, furthermore, the result of co-operation between government officials and

[5] See Goldie, 'Concepts of Strict and Absolute Liability and the Ranking of Liability in Terms of Relative Exposure to Risk', *Netherlands Yearbok of International Law* 1985, 190 seq. If there is an economic advantage in transporting crude oil in very large crude carriers and if this activity involves a larger risk of oil spills, then the possible victim pays for the economic advantage of the operator of these ships.

[6] See Handl, 'Liability as an Obligation Established by a Primary Rule of International Law', *Netherlands Yearbook of International Law* 1985, 76 seq.

[7] See Gündling, 'Verantwortlichkeit der Staaten für grenzüberschreitende Umweltbeeinträchtigungen', *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* 1985, 287.

[8] For the concept, see Jenks, 'Liability for Ultra-hazardous Activities in International Law', *Recueil des Cours* 117 (1966-I), 107.

[9] Theoretically, Handl, 'State Liability for Accidental Transnational Environmental Damage by Private Persons', *American Journal of International Law* 1980, 553 seq, did establish the obligation of states based on strict liability for damage arising out of ultra-hazardous activities.

[10] See, for instance, J. Schneider, *World Public Order of the Environment*, Toronto 1979, 163 seq.

[11] Schneider (n 10), 165 seq, for instance produces the *Trail-Smelter-*, *Corfu-Channel-* and *Gut-Dam*-Cases, whereas Handl, (n 9), 537, denounces the validity of all of them as unpersuasive.

[12] Lang, 'Haftung und Verantwortlichkeit im internationalen Umweltrecht', *Ius Humanitatis; Festschrift für Alfred Verdross*, Berlin 1980, 517 (translation provided).

[13] Schachter, 'International Law in Theory and Practice', *Recueil des Cours* 178 (1982-V), 47.

legislative authorities and, in that regard, indicate the true level of legal obligation the participating state authorities were prepared to accept at the same time of the regime creation.[14]

This article tries to investigate the direction in which the international conventional law of liability for transnational environmental damage is currently developing. It attempts to introduce into the discussion of the development of general rules of liability the parameter of the economic and historical background of the respective conventions. The general importance of this parameter for the analysis of international law has been pointed out elsewhere,[15] but a detailed analysis of this aspect has, to our knowledge, not been carried out to date.

II. Private Liability Regimes in Conventional International Law

In regard to the political, ecological and economic circumstances, the civil liability regime for oil pollution damage[16] is a precedent for several international conventional regimes governing liability for transnational environmental damage. The accidental grounding of the tanker 'Torrey Canyon' in 1967 led to a major oil spill in the English Channel and faced the British government with large expenditure[17] in clean-up costs as well as in reimbursement to private victims and regional entities. Liability according to traditional private maritime law amounted to only $48.[18] The then Intergovernmental Maritime Consultative Organization (IMCO), now known as the IMO, undertook at the request of the British government, a study of the possible consequences of the disaster. Among the subjects identified by the IMCO Council for immediate scrutiny was the issue of increased liability, which required investigation of:

'all questions relating to the nature (whether absolute or not), extent and amount of liability of the owner or operator of a ship or the owner of the cargo (jointly or severally) for damage caused to third parties by accidents suffered by the ship involving the discharge of persistent oils or other noxious or hazardous substances and in particular whether it would not be advisable

(a) to make some form of insurance of the liability compulsory;
(b) to make arrangements to enable governments and injured parties to be compensated for the damage due to the casualty and the costs incurred in combating pollution of the sea and cleaning polluted property.[19]

Already this initial mandate for IMCO the newly established Legal Committee clarified for whose benefit the inquiry was to be undertaken. Be the injured parties and those who had incurred expenditures in clean-up costs governments or private persons,

[14] For the importance of treaty law in this regard, see OECD: *Responsibility and Liability of States in Relation to Transfrontier Pollution*, Paris 1984, 4 and Goldie (n 5), 245.

[15] See Reisman, 'The Incident as a Decisional Unit in International Law', *Yale Journal of International Law* 1984, 1 seq.

[16] *International Convention on Civil Liability for Oil Pollution Damage* 1969; *International Legal Materials* 1970, 45; *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage* 1971; *International Legal Materials* 1972, 284.

[17] See Brown, 'The Lessons of the Torrey Canyon', *Current Legal Problems* 1968, 113 seq.

[18] See Sisson, 'Oil Pollution Law and the Limitation of Liability Act; A Murky Sea for Claimants Against Vessels', *Journal of Maritime Law and Commerce* 1977/78, 286.

[19] IMCO-Doc C/ES.3/5.

the policy objective of a new conventional regime was to be the strengthening of compensation payable to the victims suffering material loss or damage from such oil spills.[20]

The mandate indicated also that increased liability was—at least in part—to be placed on private industry involved in the dangerous business concerned, which should be compelled to cover the risk by insurance.[21] States did not seriously discuss the possibility of placing international liability on the flagstate of a damage-prone tanker. The proposal of Liberia, a state representing a major 'flag on convenience', that states should consider the possibility of multilateral governmental relief action instead of putting the burden on the hard-pressed shipping industry[22] and a suggestion that national relief funds[23] should be set up were unsuccessful. They did not reflect the fact that it was the British State that had initiated the project in order to be better compensated for damage and clean-up costs alongside British coasts. It was obvious that neither proposal met this goal. Therefore the international community was not prepared to assume joint international liability.

Once it was decided, in accordance with the views of the oil[24] and the shipping industry,[25] that liability was to be concentrated ('channelled') onto the owner of the tanker, the prime questions concerned the maximum amount of the damage to be insurable[26] and thus made acceptable, and whether liability was to be strict or based on fault with a reversal of the burden of proof.[27] This dispute reflects the two camps into which states participating in the negotiations were divided. Whereas maritime nations, desiring to protect their national industry against a heavy additional liability burden, favoured a rather restricted approach, coastal states, confronted with great economic hardship arising out of the dangerous activity, were not prepared to agree to a solution leaving them bearing part of the costs involved. Here we are faced with a typical confrontaion of interests in negotiations aiming at shifting the economic risk arising from dangerous activities.

To resolve this situation, the idea was born of establishing an International Fund financed by the oil industry to provide new funds for compensation.[28] Again there was no discussion of direct participation in the Fund of states themselves.[29] States did not even

[20] Thus the distribution of wealth and amenities was the primary argument for the liability regime, whereas the re-enforcement of prevention *prior to an accident* was to be achieved by a number of administrative and technical measures.

[21] Thus guaranteeing the financial assets as a necessary countermeasure against 'one-ship-companies', see D. Abecassis, *The Law and Practice Relating to Oil Pollution from Ships*, London 1978, 204 seq.

[22] IMCO-Doc LEG II/SR.6, p. 11.

[23] See Report of the Working Group on liability LEG/WG (II) I/2.

[24] The oil industry had concluded already, during the discussions in IMCO's Legal Committee, the *Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution* (TOVALOP), a private agreement for compensation on a limited, but nevertheless extended, level; *International Legal Materials* 1969, 497.

[25] See draft convention of the International Maritime Committee, Documentation 1968, Vol IV, Doc TC-22, and slightly revised version, Vol V, TC-24.

[26] Only in this connexion did the so-called 'British exceptions' become an important issue since the British government, representing the primarily London-based maritime insurance industry, held that insurance cover was not available without these exceptions; see IMCO, *Official Records of the International Legal Conference on Marine Pollution Damage* 1969, London 1973, LEG/CONF/C.2/WP.35.

[27] See draft convention of the Legal Committee reflecting both proposals; Official Records (n 26) LEG/CONF/C.2/4.

[28] Prior to the international conference, oil companies agreed on a private 'Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution' (CRISTAL); *Journal of Maritime Law and Commerce* 1970/71, 705.

[29] See Report of the Working Group; Official Records (n 26) LEG/CONF/C.2/WP.45.

accept that they should underwrite a guarantee of the financial contributions of the respective national oil industries under their control.[30]

The IMCO Council had included within its mandate an inquiry into possible restrictions of passage through certain dangerous straits and areas by ships carrying certain dangerous or noxious cargoes.[31] This inquiry never took place and one may doubt whether it would have been acceptable to the majority of delegations participating in IMCO, given their generally favourable attitude to the maritime transport industry. It might however explain the fairly co-operative attitude of major oil companies towards acceptance of an increased liability.

It is true that later the 1978 'Amoco Cadiz' casualty disclosed the insufficiency of the funds available[32] and that in a few other cases refundable claims had had to be apportioned.[33] This does not mean, however, that the private liability system has reached its limits.[34] States have reacted by concluding additional protocols,[35] primarily extending both the available amount of compensation and reducing the clauses of exemption.[36]

The private-financed oil pollution liability scheme was the first of its type. It heavily influenced several subsequent approaches to the negotiation of other liability regimes. The so far unsuccessful attempt to extend the private liability regime to maritime transport of dangerous substances other[37] than oil would combine the obligations of the ship owners and cargo interests in one treaty. Being an extension of the oil pollution regime, it is not surprising that states again were not prepared to engage in any liability scheme.[38] A similar project regarding inland transport of dangerous goods[39] is, nonetheless, currently being negotiated in the Economic Commission for Europe.

Another attempt to establish the private strict liability of the risk-creating industry concerned, is, on the basis of the liability regime for oil pollution damage, related to North Sea offshore oil drilling activities.[40] Oil companies reacted to the demand by

[30] The US and West-German proposals that did not oblige the Fund to indemnify nationals from countries whose oil industry did not pay contributions, thus making control of timely payment a national task, were not adopted: see comments to article 13, IMCO: *Official Records of the Conference on the Establishment of an International Compensation Fund for Oil Pollution Damage* 1971, London 1978, LEG/CONF.2/3 and vote, LEG/CONF.2/C.1/SR.15.

[31] Vgl IMCO-Doc C/ES.3/5: 'Consideration should also be given to the value of prohibiting completely the passage of large ships carrying such cargoes in certain areas or on certain routes.'

[32] See Rosenthal/Raper, 'Amoco Cadiz and Limitation of Liability for Oil Spill Pollution', *Virginia Journal of Natural Resources Law* 1985/86, 260.

[33] For fund practice up to 1983, see Brown, 'International Oil Pollution Compensation Fund: An Analytical Report on Fund Practice', *Oil & Petrochemical Pollution* 1983, 269.

[34] See, however, for the development of costs of oil spills, Smets, 'The Oil Spill Risk: Economic Assessment and Compensation Limit, *Journal of Maritime Law and Commerce* 1983, 23.

[35] Revised TOVALOP and CRISTAL schemes again 'voluntarily' bridge the time lag until entry into force of the protocols, see D. Abecassis/D. Jarashow, 'Oil Pollution from Ships', *International, United Kingdom and United States Law and Practice*, London 1985, 303 seq.

[36] See Jacobsen/Trotz, 'The 1984 London Protocols and the Amoco Cadiz', *Journal of Maritime Law and Commerce* 1984, 467.

[37] *Draft Convention on Liability and Compensation in Connexion with the Carriage of Noxious and Hazardous Substances by Sea* (HNS-Convention); *International Legal Materials* 1984, 150.

[38] For discussion see de Bièvre, 'Liability and Compensation in Connexion with the Carriage of Noxious and Hazardous Substances by Sea', *Journal of Maritime Law and Commerce* 1986, 61.

[39] *Draft Articles for a Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels*; *Rabels Zeitschrift für ausländisches und internationales Privatrecht* 1987, 466. See Richter-Hannes, 'Der Schutz Dritter bei Gefahrguttransporten', *UNIDROIT-Konventionsentwurf von 1986*; loc cit, 357.

[40] *Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources* 1976; *International Legal Materials* 1977, 1451.

concluding another 'voluntary' liability regime.[41] Again there was no discussion of any participation in the scheme by the licensing states.[42] On the contrary, the international convention was eventually virtually aborted because it did not improve the situation of victims, including coastal states, as compared to the compensation available to them under the existing regime based on a combination of remedies under both the applicable national laws and OPOL providing an easy and quick procedure though limiting the amount of available compensation, between which the victim has to choose.

States with a strong private-owned industry (primarily western states), are still not prepared to accept liability for damage arising out of private activities under their control. The developments of the past two decades indicate, however, that this does not necessarily mean that no compensation is available. On the contrary, between the two layers existing in theory, i.e. private liability according to national law and international liability, a third layer has been introduced. Here states accept the obligation to develop international law in order to assure the necessary means of recourse. They negotiate and conclude on this behalf international agreements governing liability and compensation issues. The financial burden, however, is placed on the branches and enterprises—private or state owned—creating the risk. In cases where enough financial assets are available, this might, from the environmental and economic point of view, well be the best solution as externalization of economic risk is avoided not only on the state level, but, according to the 'polluter pays' principle, also on the level of branches and activities creating the risk.

The attitude of the state community to developing the issue of liability for transboundary environmental damage, especially on this new layer, is reflected in two international instruments not confined to liability issues. During the 1972 Conference on the Human Environment, which took place only a few months after the convention establishing the exclusively private-financed Oil Pollution Compensation Fund had been adopted, states were not able to agree on international liability for transboundary environmental damage. They merely accepted in principle 22 of the Declaration of Principles, the obligation 'to co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage'.[43] There is no indication that this wording indicated the development of liability exclusively on the international level. The formulation offers at least the possibility of developing the international law of liability on the model of the oil pollution compensation regime, i.e. on a privately financed level. One commentator explicitly considers the oil pollution compensation regime to be an example of the development of that principle.[44]

In this connection, a last minute amendment to the Declaration is of interest. The draft principle on liability was originally worded as including 'liability and compensation *in respect of damage to the environment*'[45] and thus might have included claims regarding the injury to state sovereignty which would have to be compensated necessarily by the source state. The version adopted excludes precisely this kind of immaterial injury and

[41] *Offshore Pollution Liability Agreement (OPOL); International Legal Materials* 1974, 1409.

[42] On negotiations, see Archer, 'Civil Liability for Pollution from Offshore Operations' *Environmental Policy and Law* 1976, 2 and Fleischer, 'Oil Spills: Convention to Limit Liability', *Environmental Policy and Law* 1977, 76.

[43] UN-Conference on the Human Environment, Declaration of Principles, Principle 22; A/CONF.48/14/Rev.1.

[44] See O. Kolbasov, *Umweltschutz nach Völkerrecht*, Moskau 1985, 38.

[45] See Principle 19 (later Principle 22) in the report of the Preparatory Committee, A/CONF.48/PC.16, para 19, emphasis added.

embraces private persons and states in their capacity as victims only in respect of material loss or damage. Consequently, all liability arising out of the requirements of principle 22 might be placed only on private operators of dangerous activities.

This interpretation is corroborated by the wording of the principal article of the UN Convention on the Law of the Sea concerning state responsibility regarding the maritime environment[46] as it explicitly mentions privately financed means of compensation. The article reflects the incohate general state of the law on international liability, stipulating only that states shall be liable 'according to international law',[47] though they must 'ensure that recourse is available in accordance with their legal systems'. Below the level of international liability, the convention introduces a general obligation of states to develop the means of compensation on a private basis. Eventually, states are obliged to develop both the international and the transnational levels of recourse for damage to the marine environment. Obviously influenced by the oil pollution compensation regime,[48] the convention in fact introduces a median layer based on both a concerted action of states and on private finance, that is distinct from the bottom layer of private recourse according to national law and from the top layer of international liability. It is remarkable that there was agreement to circumvent the so far unsuccessful development of detailed norms governing international liability[49] and to introduce instead a new level of liability facing less resistance.

III. International Liability in Conventional Regimes

Apart from the 'private' liability approach, several conventions in the areas of nuclear and space law stipulate different forms of international liability. We will now investigate whether they offer precedents for the development of a general obligation of international liability for transboundary environmental damage.

It is true that five conventions on liability for transnational nuclear damage[50] introduce the standard of absolute liability combining private and international elements, but reducing the analysis of the liability regime to these characteristics[51] means losing sight of the policy objective of the treaties. For the regimes contain two other far more crucial elements. The conventions introduce the system of 'channelling' liability,

[46] Article 235 of the *United Nations Convention on the Law of the Sea* 1982; *International Legal Materials* 1982, 1261.

[47] The obligation is not confined to liability following a breach of a norm of international law. On the contrary, it extends into the area of primary rules; see Handl, 'International Liability of States for Marine Pollution', *Canadian Yearbook of International Law* 1983, 103 seq.

[48] See Art 253.3: '... development of criteria and procedures ..., such as compulsory insurance and compensation funds'. See also Stein, 'Principles of Responsibility and Liability in the Law of the Sea', in: R. Stein (ed), *Critical Environmental Issues on the Law of the Sea*, 1975, 50.

[49] The Conference agreed in an early stage not to enter into detailed negotiations of liability issues, see G. Timagenis, *International Control of Marine Pollution*, New York 1980, Vol 2, 624.

[50] 'Convention on Third Party Liability in the Field of Nuclear Energy' 1960 (Paris Convention); *European Yearbook 1960*, 203; 'Convention on the liability of the Operators of Nuclear Ships' 1962; *American Journal of International Law* 1963, 268; Convention Supplementary to the (OEEC) Paris Convention 1963 (Brussels Supplementary Convention); *International Legal Materials* 1963, 685; International Convention on Civil Liability for Nuclear Damage 1963 (Vienna Convention); *UN Treaty Series* Vol 1063, Nr I-16197, p. 263; Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material 1972; *International Legal Materials* 1972, 277.

[51] See Goldie, 'International Principles of Responsibility for Pollution', *Columbia Journal of Transnational Law* 1970, 311, holding that 'the concept of absolute liability developed in the nuclear liability treaties, more effectively than any other concept presented so far, *prevents the creator of a risk from passing that risk onto the public and thus expropriating wealth and security from other people*' (emphasis added).

i.e. concentrating all liability onto the operator of a nuclear installation, thereby abolishing any liability of any other possible defendant that might otherwise have been in issue. They also stipulate a severe limitation of liability resulting in only a low amount of compensation actually being available in case of damage. It was these two latter elements that led to the adoption of the conventions.

Western European governments that desired to develop the peaceful use of nuclear energy were heavily dependant on US suppliers. In the USA these suppliers had already achieved a discharge of the high and incalculable risk of liability involved. By contract, and later by law,[52] the governmental operator of the first atomic energy plants agreed to assume the entire liability in order to induce private companies to participate in the technological development of the new energy.[53]

In Western Europe the development of nuclear energy might potentially have been hampered unless the introduction of a similar rule excluded liability of the suppliers.[54] Thus all liability was channelled to the operator[55] as had been done in the USA. Against this background it is not surprising that the liability of the operator had to be absolute,[56] as every exception might open a loop-hole for undesirable recourse against persons other than the operator under ordinary law. It explains furthermore why there is practically no provision for a right of recourse for the operator against suppliers and others.

Three major interest groups participated in the OEEC expert meetings preparing a draft treaty on this subject. Western European states were eager to develop a promising source of energy; suppliers insisted on preclusion of liability on their part,[57] and European insurance companies tried to minimize the incalculable risk that they would have to undertake.[58] All were interested in the development of nuclear energy and elaborated a regime acceptable to their particular interests. Hence, deliberations took place without any representation of the interests of possible private or state victims. One of the major factors of negotiations aiming at increasing liability for environmental damage, the conflict of interests between risk creators and possible victims, was therefore missing.

The contracting parties of the resulting Paris Convention intended to adopt only one part of the US system and thus placed a limited and insurable private liability onto the operator. Not being able to agree upon the US model of additional government financed

[52] See Price-Anderson-Amendment, Sec 170; J. Weinstein (ed): 'Nuclear Liability, Progress in Nuclear Energy', Vol 3; Series X: *Law and Administration*, 378. Channelling is here achieved by an 'umbrella-insurance' of the operator.

[53] Thereby transferring the system applied during the development of nuclear weapons, see Hennessy, 'Indemnification of the U.S.A.E.C.'s Contractors Against Liability for Nuclear Incidents', in: J. Weinstein (n 52), 252 seq.

[54] See Belser, 'Atomic Risks: Third Party Liability and Insurance', OEEC (ed): *The Industrial Challenge of Nuclear Energy (Amsterdam Conference)*, Paris 1958, 278.

[55] See the reasoning for this rule depriving victims of otherwise open ways of recourse in 'Explanatory Memorandum'; *European Yearbook 1960*, 225, para 15.

[56] See Goldie, 'Liability for Damage and the Progressive Development of International Law', *International and Comparative Law Quarterly* 1965, 1216 seq.

[57] See in that regard *International Problems of Financial Protection Against Nuclear Risk*, A Study Under the Auspices of Harvard Law School and Atomic Industrial Forum, Inc, Cambridge, Mass, 1957, 56 seq.

[58] See Belser, 'Examen des solutions apportées par les lois nationales et les conventions internationales sur la responsabilité dans le domaine de l'énergie nucléaire aux problèmes posés aux assureurs par la couverture de cette responsabilité', *Droit nucléaire européen, Colloque* (5.-6. mai 1966), Paris 1968, 78. The insurance industry founded for this purpose a Research Centre, see H. Hug, *Haftpflicht für Schäden aus der friedlichen Verwendung der Atomenergie, Diss.* Zürich 1970, 25.

compensation, states were prepared to place onto the public of countries the burden of the largest part of the risk.[59] Acceptance of sufficiently high private liability would have precluded the need to adopt an additional layer of international liability.[60] The limit of private liability was, however, so low[61] and so disproportionate compared to the damage of a possible accident, as well as compared to the huge investments in nuclear installations, that suppliers feared some liability would occur on their part in spite of the requirement of channelling.[62] Again there was a threat that the nuclear energy programme would be hampered by the liability issue.

The suppliers' pressure[63] and not the victims' interest is the reason for the eventual agreement on conclusion of the Brussels Supplementary Convention, which obliges the licensing state of a risk-prone installation to provide assets constituting another layer of compensation and establishes a fund financed by all contracting states constituting a third layer of compensation.

Hence, the combined Paris/Brussels regime was not intended to improve the situation of possible victims but to regulate the international law of liability for transnational nuclear damage according to the needs for unhampered technological development. Primarily the influence of the suppliers made states accept a government financed compensation scheme reinforcing the system of channelling. The intention of the conventions was thus a general limitation of liabilities both in regard to the amount of compensation and to the parties liable.

We should briefly mention the transport liability convention, an even better example of this general intention. Operators of nuclear plants are, according to the Paris and Vienna Conventions (similar to the Paris Convention, but concluded at a global level), absolutely liable for all damage occurring in connection with their activity, including damage during carriage of nuclear material. However, in 1960 drafters were not prepared to intervene in the separate body of private maritime law[64] and did therefore not exclude shipowners from liability. Whereas the absolute but severely limited liability of the new nuclear energy law extended to maritime transport of nuclear material, the rule channelling did not.[65]

The limited absolute liability of the operator as compared to (in some cases) the unlimited liability of the shipowner made maritime transport of nuclear material virtually impossible[66] unless a contractual obligation was assumed by the concerned

[59] It was their way answering the question of 'how much of this risk should be borne by the operator . . ., how much by the individuals who suffered the damage, and finally to what extent should states make available public funds for compensation', Explanatory Memorandum' (n 55), para 6.

[60] The major obstacle was not the creation of additional liability itself, but its *international* element.

[61] 15m US$ with a possible reduction by national law to not less than 5m US$, whereas combined US-liability was up to 500m US$.

[62] They pressed for state participation, see Arangio-Ruiz, 'Some International Legal Problems of the Civil Use of Nuclear Energy', *Recueil des Cours* 107 (1962-III), 599.

[63] Hence Handl (n 9) 560, is mistaken when attributing the subsidiary state liability of the nuclear liability conventions to 'the state's ultimate control over the transnationally hazardous activity and the benefit it presumably derives from it'. Instead, the rationale behind subsidiary state liability is but an economic evaluation without regard to those exposed to risk.

[64] See explanation of Explanatory Memorandum (n 55), para 34–35.

[65] Whereas a 'supersession' clause in the Nuclear Ship Convention stipulates its priority over other transport agreements, this clause is missing in the Paris and Vienna Conventions. Even such a clause however would not have been able to avoid all conflicts between the two laws.

[66] Maritime insurance companies (P&I Clubs) excluded nuclear risks explicitly from their unlimited cover of maritime risks, see Miller, 'Liability Insurance Cover of Carriers by Sea of Nuclear Materials', Third Party Liability and Insurance in the Field of Maritime Carriage of Nuclear Substance', *Monaco-Symposium* 1968, 283.

operator to accept unlimited reimbursement of possible claims against the shipowner,[67] thereby expressively circumventing his privilege of limitation.[68] Interested in both ensuring the economic benefit of maritime transport and the operators' privilege of limitation of liability, Western European states and the USA negotiated in co-operation with maritime and nuclear interest groups a short Convention, simply channelling all claims to the Paris/Brussels regime.[69] Its only purpose is to avoid any liability of shipowners in relation to maritime transport of nuclear material. Hence, it simply limits liability according to international nuclear law with no substitute compensation for the lost additional liability[70] under private maritime law. It thus simply bridges a gap left open by the Paris and Vienna conventional regimes.

The parties negotiating in Paris, Brussels and later on in London were industrialized countries from a relatively homogenous region and had therefore similar interests. The Vienna Convention, negotiated on a global level, lacked these favourable conditions. Socialist countries did not depend on US supplies. Developing countries were divided into two groups, with some considering themselves exclusively as purchasers of nuclear equipment and therefore demanding a liability of suppliers and some considering themselves purely as victims and hence demanding high amounts of liability. Thus, the conference had to settle on a minimum level, introducing the principles of the Paris Convention with an amount of compensation not lower than a derisory $5 million.

It is true that the licensing state guarantees the financial assets necessary for compensation. To construe this as an example of international liability accepted by states[71] seems, however, to overinterpret the provisions of the formal regime. Again, it has to be seen against the background of the extraordinary low limit of liability set and the general intent to restrict transnational liability. In fact, state participation is not more than a compromise, allowing the socialist countries to substitute the compulsory insurance of the operator with a state guarantee.

There is one other convention governing liability for transnational nuclear damage. Though this convention regarding the liability of operators of nuclear powered ships has never entered into force,[72] its liability regime facilitated the negotiations of several bilateral treaties governing port access of the two nuclear carriers 'Otto Hahn' and 'Savannah'.[73]

It was the time consuming and burdensome necessity of negotiating bilateral

[67] See Miller (n 66), 285 as to US and British and Lagorce, 'Practical Position of Nuclear Operators with Respect to Third Party Liability Insurance on the Maritime Carriage of Nuclear Substances', *Monaco-Symposium* (n 66), 160, as to French practice.

[68] In other cases states shipped nuclear material on warships, see Lagorce (n 67), 159–60 and OECD Report to *IMCO LEG/X* 3, 3.

[69] Or, as the case may be, to the Vienna regime and similar national liability regulations.

[70] Only the US delegate suggested the raising, as a corollary, of the limits of the nuclear liability regimes, with special regard to the Vienna conventional regime, see LEG/CONF3/C.1/SR.1, 2.

[71] See Handl (n 9), 540.

[72] It extends the liability regime to nuclear warships. This turned out to be unacceptable to the two superpowers; see declarations of US and Soviet delegates at the Diplomatic Conference, *Conference Diplomatique de Droit Maritime* Onzième Session (2e phase), Bruxelles 1962, Royaume de Belgique, Ministère des affaires étrangères et du commerce extérieur, Brussels 1963, 609 and 664 seq.

[73] See Könz, 'The 1962 Brussels Convention on the Liability of the Operator of Nuclear Ships', *American Journal of International Law* 1963, 111; for 'Savanah'-treaties see Boulanger, 'International Conventions and Agreements on Nuclear Ships; Nuclear Law for a Developing World', *IAEA Legal Series* No 5, Vienna 1969, 179 seq; for 'Otto Hahn'-treaties see Breuer, 'Reflections on International Agreements Covering the Trading in Foreign Waters of the "Otto Hahn" '; *Symposium on Nuclear Ships*, Hamburg 1971, 930 seq.

agreements with each port country that led the US Government[74] to initiate the project of a global convention when the first nuclear carrier was under construction. Thus, the principal idea behind the convention was to provide for a legal regime that would facilitate the development of this new form of propulsion. Accordingly, liability would not be governed by private maritime law but by the principles of nuclear liability law. This time, however, not only suppliers[75] but also port states were pressing for high amounts of compensation. Their strong position explains why at the same time basically the same group of states, represented sometimes by the same delegates,[76] settled in Vienna for a minimum liability of a low US$5m, whereas in Brussels they had agreed upon a US$10m limit. This meant of course that it was necessary also to provide for a state guarantee as it was out of the question that such an amount was insurable at that time. Though states carefully avoided any direct liability by wording the clause so as to oblige them only to provide the operator with the necessary financial assets, they nevertheless did, as in the case of the Brussels Supplementary Convention, accept some liability obligations *in their capacity as licensing states*.[77] Whereas in this case the interests of possible victims have been represented, the interest in regime creation stemmed nevertheless from the few industrial states that desired to develop nuclear propulsion. The Paris/Brussels/London regime was a direct result of a threat by suppliers and carriers to boycott the programme. The nuclear ship Convention in addition faced some pressure from possible victim states. It merits attention, however, that, though in a strong position, they did not manage to raise the available amount of compensation to a level of an estimated actual damage.[78]

All nuclear liability Conventions were intended to overcome practical obstacles hampering the development of the peaceful uses of atomic energy. Technological and energy policies simply could not have been perceived or developed without international rules. States had to attract sufficient economic support for the programmes decided upon. Thus the liability regimes were primarily a device for implementation of these programmes. Herein lies the principal difference in political background when comparing them to the oil pollution compensation regime.

This conclusion is, to be sure, not true for the space liability Convention[79] which stipulates the unlimited and absolute international liability of the controlling state for all damage occurring on earth. Unlike in all other liability regimes, no private liability element exists. It might therefore be considered a precedent for a future regime

[74] The US government initiated a project in the two atomic fora of OEEC and IAEA. This explains the haste of the traditional maritime law forum, the IMC; see Röhreke, *Haftung der atomgetriebenen Schiffe*, Hansa 1960, 291 and Colliard, 'Convention de Bruxelles relative à la responsabilité des exploitants de navires nucléaires', *Aspects du Droit de l'Energie atomique*; Institut de Droit comparé de l'Université de Paris, Paris 1965, Vol 1, p. 234. Contrast, however, G. Hoog, *Die Konvention über die Haftung der Inhaber von Reaktorschiffen vom 23. Mai 1962*, Hamburg 1970, S.13. For the preparations of IMC, see International Maritime Committee, *XXIVth Conference*, Rijeka 1959.

[75] The influence of the suppliers is to be seen, for instance, regarding art XIX, which stipulates that the liability regime of the convention—including the rule of channelling—will continue for twenty-five years after expiry of the conventional regime for the licensing state, see Könz (n 73), 110.

[76] Vgl Könz, 'La responsabilité des exploitants des navires nucléaires. La Conférence Diplomatique de Bruxelles 1961–1962', *Aspects du Droit de l'Energie atomique*, Institut de Droit comparé de l'Université de Paris, Paris 1965, Vol 1, 226.

[77] The rule of channelling leads thus ultimately to international liability, see P.-M. Dupuy, *La responsabilité internationale des Etats pour les dommages d'origine technologique et industriel*, Paris 1976, 113 seq.

[78] Instead, they settled for an amount less than that of the Paris/Brussels regime, providing for an overall indemnity of at that time US$120m.

[79] Convention on International Liability for Damage by Space Objects, 1972; *International Legal Materials* 1971, 965.

governing international liability for transnational environmental damage. However, again the political background that renders the regime rather exceptional has to be taken into account.

Outer space is an area of high military sensitivity. Both superpowers, as well as smaller states at that time able to engage in space activities, were not interested in extending the arms race into space. Hence, political and security considerations necessitated agreement by both military blocks on a legal regime of outer space at the peak time of the 'Cold War'.[80] The United Nations, as the only global and political international organization, appeared to be the proper forum for negotiating this objective.[81] Thus, following a long procedural struggle,[82] serious negotiations on a space regime began in 1962 in the UN Committee on the Peaceful Uses of Outer Space. Whereas the Soviet Union was primarily interested in negotiations on general principles,[83] the USA favoured tackling the thorny issue of liability for damage arising out of space activities.[84] As a political compromise, it was agreed to proceed with both the elaboration of principles[85] and a specific convention on liability as well as other specific issues. Contrary to nuclear liability law and possibly also that concerning maritime carriage of oil, the dangerous activity in question was not going to be hampered by liability issues. Participating states had instead to overcome severe political obstacles not blocking the activity itself, but threatening global security.

When in 1966, based upon the primary agreement of the two superpowers,[86] the Outer Space Treaty was adopted,[87] it was agreed, within the political context of the legal regime on outer space, that there should be a tight regime based on international responsibility of the controlling state not only for activities on its own behalf but also for private activities carried out under its authority. The stipulation of the international liability of the controlling state[88] corroborates its obligation continuously to supervise and control governmental, as well as private, space enterprises. It has to be seen in the framework of the space regime and not as a mere technical question of how to adjust the economic risk involved in space activities.

A private liability regime placing only subsidiary obligations on the licensing state, as established in the case of nuclear energy, was never seriously discussed,[89] though it was

[80] 4 November 1957 the Soviet Union launched 'Sputnik 1'.

[81] The General Assembly immediately adopted a Resolution confining space activities to peaceful purposes, see UN-Resolution 1148 (XII) (1957).

[82] For the role of the UN in the negotiations see C. Christol, *The Modern Law of Outer Space*, New York 1984, 12 seq. Accordingly, the principle of consensus was adopted; see Galloway, 'Consensus Decisionmaking by the United Nations Committee on the Peaceful Uses of Outer Space', *Journal of Space Law* 1979, 3 seq.

[83] See A/AC.105/C.2/SR.1, 6 and SR.14, 3.

[84] See A/AC.105/C.2/SR.1.

[85] See *Declaration of Legal Principles Governing the Activities in Outer Space*, UN-Resolution 1962 (XVIII), adopted in 1963; for international liability see para 8.

[86] On the domination of the bilateral relation of the two superpowers see Courteix, 'La coopération américano-soviétique dans le domaine de l'exploration et de l'utilisation pacifique de l'espace extra-atmosphérique', *Annuaire Français de Droit International* 1972, 734.

[87] Treaty on Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, 1967; *American Journal of International Law* 1967, 644.

[88] See Art. VII: 'Each State Party to the Treaty that launches or procures the launching of an object into outer space . . . and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object . . .'.

[89] Even the USA proposed international liability, see A/AC.105/6, 7. On the contrary, the Soviet Union proposed that all activities of any kind pertaining to the exploration and use of outer space shall *be carried out solely and exclusively by States*'; see proposal for a declaration of principles, A/AC.105/6, 4 (emphasis added).

promoted by private institutions and interest groups.[90] States obviously considered space activities as primarily affecting not their economic but, on the contrary, their military and security interests.

Accordingly, economic questions played but a minor role. There was practically no discussion on the need for a standard of absolute liability.[91] Furthermore, states settled eventually for unlimited liability, whereas the limit of state guarantee had been a prime issue during negotiations on nuclear liability. Space activities seemed for a long period to be confined to a few economically strong countries with all others considering themselves as possible victims. On the other hand, issues involving aspects of state sovereignty appeared to be important obstacles in this field. Whereas other liability conventions identify national courts as the forum for settlement of disputes, in the case of space disputes litigation is to be initiated through cumbersome diplomatic channels and any decisions of arbitration commissions are not binding.

The highly politicized background of the decade-long negotiations, and the low ranking of economic issues, render the liability Convention for space activities a project strictly distinct from all other conventional liability regimes for transnational environmental damage. Though it is intended to avoid externalization of economic risks, the obligation of channelling liability on to the controlling state has, in an exceptional political context, been influenced primarily by military and security interests.

IV. Conclusion

As the number of Conventions is low and can in fact be further reduced to three categories of treaties, one has to be careful in generalizing. Focusing on the multitude of equally dangerous activities that are so far not governed by specific regimes but instead by the inapplicable and therefore still unapplied general norms of liability, what criteria for the development of these general norms may be derived from the preceeding survey? To begin with, without conventional regimes in all cases activities could not have been carried out as smoothly as has been possible under these regimes. Conventions thus avoided hampering and blocking the dangerous activities and reduced transaction costs. This survey, however, has revealed important differences between regimes and the heavy influence of political circumstances on regime mechanisms.

First of all, we are faced with two types of regimes stipulating different forms of international liability. Whereas the space liability regime expressly excludes private participation, nuclear liability law requires that liability of the operator be established. The key distinction explaining these differences seems to be the relation between military and security (i.e. political) aspects, on the one side, and economic aspects, based to a large extent on civil considerations, on the other.

Regarding space activities, military and civil components were at the time of regime creation, and are still today, heavily intertwined. Military and global-political con-

[90] See Cooper, 'Memorandum of Suggestions for an International Convention on Third Party Damage Caused by Space Vehicles', Haley/Grönkers (eds): *X Ith International Astronautical Congress, Proceedings*, Vol 3: *Third Colloqium on the Law of Outer Space*, Stockholm 1961, 144; see also Bodenschatz, 'Vorschläge zu einem internationalen Haftungsabkommen betreffend Schäden, verursacht durch Raumfahrzeuge, insbesondere im Hinblick auf die Ttigkeit privater Halter', *Zeitschrift für Luft- und Raumfahrtrecht* 1965, 313.

[91] See Pfeifer, 'International Liability for Damage Caused by Space Objects', *Zeitschrift für Luft- und Weltraumrecht* 1981, 221.

siderations have always been a domain of governmental interest. At the time of negotiations on liability for space activities, this interest obviously prevailed. The general space regime being in the centre of policy consideration, the impact of environmental and economic interests on the liability regime had been sharply reduced. Thus, some details of the regime, including the quality of providing for unlimited international liability, are based on a principal decision to extend direct state control into outer space. They may not be explained by environmental or economic patterns as was the case in the nuclear energy regimes.

Regarding the civil use of nuclear energy, the economic and the military political sphere had at the time of regime-creation already been separated off. The civil use of nuclear energy was largely outside the scope of military considerations. Following tests of Soviet nuclear bombs, US President Eisenhower adopted in 1957 a policy restricting only military proliferation of nuclear technology whereas for civil purposes it was distributed relatively unhampered. Only some technical questions, including liability, had to be solved. Therefore, negotiations were attended primarily by experts in liability and nuclear energy issues and proceeded in 'technical' fora. In the case of the nuclear ship Convention, however, by including nuclear powered warships in the liability regime, negotiators neglected the strict division between military and civil issues. Immediately, military political considerations[92] prevailed, as they did in space law, and the treaty itself never entered into force. The experts were, however, able to work out an applicable conventional regime based on the needs of an infant industry that involved high risk being dealt with in several bilateral agreements. States accepted, as in the other regimes on nuclear liability, public participation in the liability only as far as necessary and only in addition to the limited private liability. The fairly unanimous decision in favour of private liability, adapted to an economic activity designed for future operation under private control, was a matter of principle. The subsidiary liability of licensing states, at a preliminary stage of the industry, was but a matter of practicality.

Transport of dangerous substances is to be considered an almost purely economic activity. A comparison with nuclear liability law discloses a second major distinction. Whereas in one case states engaged in subsidiary liability, in the other they did not. The US delegate to the 1969 Brussels Conference suggested as a criterion that state participation 'should only be considered if it could be shown that incremental insurance costs resulting from a traditional type though high limit maritime law solution were so huge as to make it uneconomic for vessel owners to continue in business'.[93] In other words, states were not prepared to engage in subsidiary liability as long as the industry in question itself is able to bear the burden of increased liability. Contrary to the case of space law, the consideration is here not one of principle, but of pure economic evaluation. It is the same criterion as had been applied in nuclear liability law. Only in one case was subsidiary state participation deemed necessary, in the other it was not.

Future attempts to regulate liability in other areas of dangerous activities will, therefore, have to focus primarily on the economic capacity of the risk-creating industry to bear the burden of increased liability. It is of little use insisting on a formal

[92] The US decision not to sign the convention came as a surprise to the US delegation at the conference, too, see Boulanger, '20 Jahre Reaktorschiffs-Haftungs konvention. Der alte Mann und das Seerecht', *Atomwirtschaft* 1982, 426. US-shipping and nuclear industries were in favour of a US-signature, see Cavers, 'Improving Financial Protection for the Public against Hazards of Nuclear Power', *Harvard Law Review* 1964, 684 seq.

[93] LEG III/WP.1, 2–3.

transference of one of the existing regimes into other areas without careful scrutiny of the political and economic background.[94]

States seem to accept a fully-fledged international liability only in areas where issues of global and military importance prevail over economic and civil aspects. In areas where economic aspects prevail they obviously favour private solutions of the liability problem. Adequate private liability regimes in turn reduce the necessity of elaborating applicable general norms of liability for transnational environmental damage as they discourage claims against the controlling government.[95] Hence, whereas in theory international liability might be reinforced by the adoption of liability conventions, if only private ones,[96] *de facto* states become reluctant to undertake costly obligations when private regimes function satisfactorily. International liability tends to be relegated to the realm of general rules, inapplicable by their very generality.

As to the development of a general regime for liability for transnational environmental damage, we should emphasize that not all of the conventional regimes were intended to increase liability in favour of victims; nor in all cases was international liability accepted by states. Conventional state practice in the field of liability for transnational environmental damage fails to indicate a development towards an increased international liability. On the contrary, conventions negotiated during the last two decades contain not international, but instead internationally governed private liability regimes. An international legal instrument on liability, intended to influence political decisions, will have to reflect this fact. Given the general reluctance of states to undertake heavily increased liability obligations, as compared to the present *de facto* situation, the primary aim of such an instrument in future might be to encourage states to conclude agreements governing civil liability adapted to specific areas that involve risk of transnational environmental damage.

[94] See Handl (n 9), 563–4, proposing that the HNS-Convention introduce a subsidiary state liability following the alleged precedent of the nuclear ship convention.

[95] See A. Springer, *The International Law of Pollution. Protecting the Global Environment in a World of Sovereign States*, Westport 1983, 139.

[96] See for instance Handl (n 47), 104, who states, in regard to ultra-hazardous activities: 'if there is an evidently growing international consensus to hold the private actor strict liable . . . it would be difficult to maintain that states might not be held internationally to an equally strict standard of accountability'.