Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities, with commentaries

2006

Text adopted by the International Law Commission at its fifty-eighth session, in 2006, and submitted to the General Assembly as a part of the Commission's report covering the work of that session (A/61/10). The report, which also contains commentaries on the draft articles, appears in *Yearbook of the International Law Commission, 2006*, vol. II, Part Two.

5. In the event that the measures under the preceding paragraphs are insufficient to provide adequate compensation, the State of origin should also ensure that additional financial resources are made available.

Principle 5. Response measures

Upon the occurrence of an incident involving a hazardous activity which results or is likely to result in transboundary damage:

(*a*) the State of origin shall promptly notify all States affected or likely to be affected of the incident and the possible effects of the transboundary damage;

(*b*) the State of origin, with the appropriate involvement of the operator, shall ensure that appropriate response measures are taken and should, for this purpose, rely upon the best available scientific data and technology;

(*c*) the State of origin, as appropriate, should also consult with and seek the cooperation of all States affected or likely to be affected to mitigate the effects of transboundary damage and if possible eliminate them;

(*d*) the States affected or likely to be affected by the transboundary damage shall take all feasible measures to mitigate and if possible to eliminate the effects of such damage;

(*e*) the States concerned should, where appropriate, seek the assistance of competent international organizations and other States on mutually acceptable terms and conditions.

Principle 6. International and domestic remedies

1. States shall provide their domestic judicial and administrative bodies with the necessary jurisdiction and competence and ensure that these bodies have prompt, adequate and effective remedies available in the event of transboundary damage caused by hazardous activities located within their territory or otherwise under their jurisdiction or control.

2. Victims of transboundary damage should have access to remedies in the State of origin that are no less prompt, adequate and effective than those available to victims that suffer damage, from the same incident, within the territory of that State.

3. Paragraphs 1 and 2 are without prejudice to the right of the victims to seek remedies other than those available in the State of origin.

4. States may provide for recourse to international claims settlement procedures that are expeditious and involve minimal expenses.

5. States should guarantee appropriate access to information relevant for the pursuance of remedies, including claims for compensation.

Principle 7. Development of specific international regimes

1. Where, in respect of particular categories of hazardous activities, specific global, regional or bilateral agreements would provide effective arrangements concerning compensation, response measures and international and domestic remedies, all efforts should be made to conclude such specific agreements.

2. Such agreements should, as appropriate, include arrangements for industry and/or State funds to provide supplementary compensation in the event that the financial resources of the operator, including financial security measures, are insufficient to cover the damage suffered as a result of an incident. Any such funds may be designed to supplement or replace national industry-based funds.

Principle 8. Implementation

1. Each State should adopt the necessary legislative, regulatory and administrative measures to implement the present draft principles.

2. The present draft principles and the measures adopted to implement them shall be applied without any discrimination such as that based on nationality, domicile or residence.

3. States should cooperate with each other to implement the present draft principles.

2. Text of the draft principles and commentaries thereto

67. The text of the draft principles with commentaries thereto adopted by the Commission at its fifty-eighth session, are reproduced below.

DRAFT PRINCIPLES ON THE ALLOCATION OF LOSS IN THE CASE OF TRANSBOUNDARY HARM ARISING OUT OF HAZARDOUS ACTIVITIES

General commentary

(1) The background to these draft principles, together with the underlying approach, is outlined in the preamble. It places the draft principles in the context of the relevant provisions of the Rio Declaration on Environment and Development ("Rio Declaration")[301] but then specifically recalls the draft articles on the prevention of transboundary harm from hazardous activities, approved by the Commisison at its fifty-third session, in 2001.[302]

(2) It briefly provides the essential background that, even if the relevant State fully complies with its prevention obligations, under international law, accidents or other incidents may nonetheless occur and have transboundary consequences that cause harm and serious loss to other States and their nationals.

(3) It is important, as the preamble records, that those who suffer harm or loss as a result of such incidents involving hazardous activities are not left to carry those losses and are able to obtain prompt and adequate compensation. These draft principles establish the means by which this may be accomplished.

(4) As the preamble notes, the necessary arrangements for compensation may be provided under international agreements covering specific hazardous activities, and the draft principles encourage the development of such agreements at the international, regional or bilateral level as appropriate.

(5) The draft principles are therefore intended to contribute to the process of development of international law in this field, both by providing appropriate guidance to States in respect of hazardous activities not covered by specific agreements, and by indicating the matters that should be dealt with in such agreements.

(6) The preamble also makes the point that States are responsible under international law for infringement of their prevention obligations. The draft principles are

[301] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3–14 June 1992* (United Nations publication, Sales No. E.93.I.8 and corrigenda), vol. I: *Resolutions adopted by the Conference*, resolution 1, Annex I.

[302] See footnote 292 above.

therefore without prejudice to the rules relating to State responsibility and any claim that may lie under those rules in the event of a breach of the obligations of prevention.

(7) In preparing the draft principles, the Commission has proceeded on the basis of a number of basic understandings. In the first place, there is a general understanding that (*a*) the regime should be general and residual in character; and that (*b*) such a regime should be without prejudice to the relevant rules of State responsibility adopted by the Commission in 2001.[303] Secondly, there is an understanding that the scope of the liability aspects should be the same as the scope of the draft articles on prevention of transboundary harm from hazardous activities, which the Commission also adopted in 2001.[304] In particular, to trigger the regime governing transboundary damage, the same threshold, "significant", that is made applicable in the case of transboundary harm is employed. The Commission also carefully considered the desirability of examining the issues concerning global commons. After observing that the issues associated with that topic are different and had their own particular features, the Commission came to the conclusion that they require a separate treatment.[305] Thirdly, the work has proceeded on the basis of certain policy considerations: (*a*) that while the activities contemplated for coverage under the present topic are essential for economic development and beneficial to society, the regime must provide for prompt and adequate compensation for the innocent victims in the event that such activities give rise to transboundary damage; and (*b*) that contingency plans and response measures should be in place over and above those contemplated in the draft articles on prevention.

(8) Fourthly, the various existing models of liability and compensation have confirmed that State liability is accepted essentially in the case of outer space activities. Liability for activities falling within the scope of the present draft principles primarily attaches to the operator, and such liability would be without the requirement of proof of fault, and may be limited or subject to conditions, limitations and exceptions. However, it is equally recognized that such liability need not always be placed on the operator of a hazardous or a risk-bearing activity and other entities could equally be designated by agreement or by law. The important point is that the person or entity concerned is functionally in command or control or directs or exercises overall supervision and hence, as the beneficiary of the activity, may be held liable.

(9) Fifthly, it may be noted that provision is made for supplementary funding in many schemes of allocation of loss, and such funding in the present case would be particularly important if the concept of limited liability is adopted. The basic understanding is to adopt a scheme of allocation of loss, spreading the loss among multiple actors, including, as appropriate, the State. In view of the general and residual character, it is not considered necessary to predetermine the share for the different actors or to precisely identify the role to be assigned to the State. At the same time, it is recognized that the State has, under international law, duties of prevention, and these entail certain minimum standards of due diligence.[306] States are obliged, in accordance with such duties, to allow hazardous activities with a risk of significant transboundary harm only upon prior authorization, utilizing environmental and transboundary impact assessments and monitoring those impacts as appropriate. The attachment of primary liability on the operator, in other words, does not in any way absolve the State from discharging its own duties of prevention under international law.

(10) Sixthly, while there is broad understanding on the basic elements to be incorporated in the regime governing the scheme of allocation of loss in case of damage arising from hazardous activities, it is understood that in most cases the substantive or applicable law to resolve compensation claims may involve other aspects such as civil liability or criminal liability or both, and would depend on a number of variables. Principles of civil law, common law or private international law governing choice of forums as well as the applicable law may come into focus depending upon the context and the jurisdiction involved. Accordingly, the proposed scheme is not only general and residuary but is also flexible and without any prejudice to the claims that might arise or to questions of the applicable law and procedures.

(11) As the draft principles are general and residuary in character they are cast as a non-binding declaration of draft principles. The different characteristics of particular hazardous activities may require the adoption of different approaches with regard to specific arrangements. In addition, the choices or approaches adopted may vary under different legal systems. Further, the choices and approaches adopted and their implementation may also be influenced by different stages of economic development of the countries concerned.

(12) On balance, the Commission has concluded that recommended draft principles would have the advantage of not requiring a harmonization of national laws and legal systems, which is fraught with difficulties. Moreover, it is felt that the goal of widespread acceptance of the substantive provisions is more likely to be met if the outcome is cast as principles. In their essential parts, they provide that victims that suffer the damage should be compensated promptly and adequately, and that environmental damage, relating to which States may pursue claims, be mitigated through prompt response measures and, to the extent possible, be restored or reinstated.

(13) The commentaries are organized as containing an explanation of the scope and context of each draft principle, as well as an analysis of relevant trends and possible options available to assist States in the adoption

[303] For the text and commentaries of the articles on responsibility of States for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, para. 77.

[304] *Ibid*., para. 98.

[305] See *Yearbook ... 2002*, vol. II (Part Two), para. 447.

[306] Birnie and Boyle have observed in respect of the draft articles on prevention that "there is ample authority in treaties, case law and state practice for regarding these provisions of the Commission's draft convention [on the prevention of transboundary harm] as codification of existing international law. They represent the minimum standard required of states when managing transboundary risks and giving effect to Principle 2 of the Rio Declaration" (P. W. Birnie and A. E. Boyle, *International Law and the Environment*, 2nd ed., Oxford University Press, 2002, p. 113).

of appropriate national measures of implementation and in the elaboration of specific international regimes. The focus of the Commission was on the formulation of the substance of the draft principles as a coherent set of standards of conduct and practice. It did not attempt to identify the current status of the various aspects of the draft principles in customary international law, and the way in which the draft principles are formulated is not intended to affect that question.

Preamble

The General Assembly,

***Reaffirming* Principles 13 and 16 of the Rio Declaration on Environment and Development,**

***Recalling* the draft articles on the prevention of transboundary harm from hazardous activities,**[307]

***Aware* that incidents involving hazardous activities may occur despite compliance by the relevant State with its obligations concerning prevention of transboundary harm from hazardous activities,**

***Noting* that as a result of such incidents other States and/or their nationals may suffer harm and serious loss,**

***Emphasizing* that appropriate and effective measures should be in place to ensure that those natural and legal persons, including States, that incur harm and loss as a result of such incidents are able to obtain prompt and adequate compensation,**

***Concerned* that prompt and effective response measures should be taken to minimize the harm and loss which may result from such incidents,**

***Noting* that States are responsible for infringements of their obligations of prevention under international law,**

***Recalling* the significance of existing international agreements covering specific categories of hazardous activities and stressing the importance of the conclusion of further such agreements,**

***Desiring* to contribute to the development of international law in this field,**

…

Commentary

(1) In the past, the Commission has generally presented to the General Assembly sets of draft articles without a draft preamble, leaving its elaboration to States. However, there have also been precedents during which the Commission has submitted a draft preamble. This was the case with respect to the draft convention on the elimination of future statelessness and the draft convention on the reduction of future statelessness,[308] and the draft articles on the nationality of natural persons in relation to the succession of States,[309] as well as with respect to the draft articles on prevention.[310] Since the Commission would be presenting a draft declaration of principles, a preamble is considered all the more pertinent.

(2) As noted in the introduction, the *first* preambular paragraph commences with a reference to Principles 13 and 16 of the Rio Declaration.[311] The need to develop national law regarding liability and compensation for the victims of pollution and other environmental damage is stressed in Principle 13 of that Declaration, which reiterates Principle 22 of the Declaration of the United Nations Conference on the Human Environment ("Stockholm Declaration").[312] Principle 16 of the Rio Declaration addresses the promotion of internalization of environmental costs, taking into account the "polluter pays" principle. The Commission considers the "polluter pays" principle as an essential component in underpinning the present draft principles to ensure that victims that suffer harm as a result of an incident involving a hazardous activity are able to obtain prompt and adequate compensation.

(3) The *second* preambular paragraph is self-explanatory. It links the present draft principles to the draft articles on prevention. The *third*, *fourth*, *fifth* and *sixth* preambular paragraphs seek to provide the essential rationale for the present draft principles.

(4) The *seventh* preambular paragraph stresses that these draft principles do not affect the responsibility that a State may incur as a result of infringement of its obligations of prevention under international law; it seeks to keep claims arising from implementation of that regime from the scope of application of these draft principles.

(5) The *eighth* preambular paragraph recognizes the existence of specific international agreements for various categories of hazardous activities and the importance of concluding further such agreements, while the *last* preambular paragraph captures the desire to contribute to the process of development of international law in this field.

Principle 1. Scope of application

The present draft principles apply to transboundary damage caused by hazardous activities not prohibited by international law.

Commentary

(1) The "scope of application" provision is drafted to contextualize the draft principles and to reflect the understanding that the present draft principles would have the same scope of application as the 2001 draft articles on

[307] *Yearbook … 2001*, vol. II (Part Two) and corrigendum, pp. 146 *et seq*., para. 97.

[308] *Yearbook … 1954*, vol. II, document A/2693, p. 140.

[309] *Yearbook … 1999*, vol. II (Part Two), document A/54/10, p. 20 *et seq*., para. 47.

[310] See footnote 292 above.

[311] See footnote 301 above.

[312] *Report of the United Nations Conference on the Human Environment, Stockholm, 5–16 June 1972* (United Nations publication, Sales No. E.73.II.A.14), part one, chap. I.

prevention of transboundary harm from hazardous activities.[313] The interrelated nature of the concepts of "prevention" and "liability" needs no particular emphasis in the context of the work of the Commission.[314] This provision identifies that the focus of the present draft principles is transboundary damage. The notion of "transboundary damage", like the notion of "transboundary harm", focuses on damage caused in the jurisdiction of one State by activities situated in another State.

(2) In the first instance, hazardous activities coming within the scope of the present draft principles are those not prohibited by international law and involve the "risk of causing significant transboundary harm through their physical consequences". Different types of activities could be envisaged under this category. As the title of the draft principles indicates, any hazardous or by implication any ultrahazardous activity, which involves, at a minimum, a risk of causing significant transboundary harm, is covered. These are activities that have a high probability of causing significant transboundary harm or a low probability of causing disastrous transboundary harm. The combined effect of the probability of occurrence of an accident and the magnitude of its injurious impact separates such activities from any other activities.[315]

(3) Following the same approach adopted in the case of the draft articles on prevention, the Commission opted to dispense with the specification of a list of activities. Such specification of a list of activities is not without problems and functionally it is not considered essential. Any such list of activities is likely to be under-inclusive and might quickly need review in the light of ever-evolving technological developments. Further, except for certain ultrahazardous activities which are mostly the subject of special regulation, e.g., in the nuclear field or in the context of activities in outer space, the risk that flows from an activity is primarily a function of the particular application, the specific context and the manner of operation. It is felt that it is difficult to capture these elements in a generic list. However, the activities coming within the scope of the present principles are the same as those that are subject to the requirement of prior authorization under the draft articles on prevention. Moreover, it is always open to States to specify activities coming within the scope of the present principles through multilateral, regional or bilateral arrangements[316] or to do so in their national legislation.

(4) The phrase "transboundary damage caused by hazardous activities not prohibited by international law" has a similar import as the phrase "activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences" in article 1 of the draft articles on prevention. It has a particular meaning, which is well understood as containing four elements, namely (*a*) such activities are not prohibited by international law; (*b*) such activities involve a risk of causing significant harm; (*c*) such harm must be transboundary; and (*d*) the transboundary harm must be caused by such activities through their physical consequences.[317]

(5) Like the draft articles on prevention, the activities coming within the scope of the present principles have an element of human causation and are qualified as "activities not prohibited by international law". This particular phrase has been adopted essentially to distinguish the present principles from the operation of the rules governing State responsibility. The Commission recognized the importance, not only of questions of responsibility for internationally wrongful acts, but also questions concerning the obligation to make good any harmful consequences arising out of certain activities, especially those which, because of their nature, present certain risks. However, in view of the entirely different basis of liability for risk and the different nature of the rules governing it, as well as its content and the forms it may assume, the Commission decided to address the two subjects separately.[318] That is, for the purpose of the principles, the focus is on the consequences of the activity and not on the lawfulness of the activity itself.

(6) The present draft principles, like the draft articles on prevention, are concerned with primary rules. Accordingly, the non-fulfilment of the duty of prevention prescribed by the draft articles on prevention could engage State responsibility without necessarily giving rise to the implication that the activity itself is prohibited.[319] In such

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[313] See footnote 292 above.

[314] See the recommendation of the Working Group on international liability for injurious consequences arising out of acts not prohibited by international law established by the Commission at its fifty-fourth session, in 2002, *Yearbook ... 2002*, vol. II (Part Two), p. 91, paras. 447–448.

[315] See *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 152 (paragraph (1) of the commentary to article 2 of the draft articles on prevention).

[316] For example, various liability regimes deal with the type of activities which come under their scope: the Convention on the Protection of the Marine Environment of the Baltic Sea Area; the Convention on the Transboundary Effects of Industrial Accidents; Annex I to the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters; and Annex II to the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, where activities such as the installations or sites for the partial or complete disposal of solid, liquid or gaseous wastes by incineration on land or at sea, and installations or sites for thermal degradation of solid, gaseous or liquid wastes under reduced oxygen supply, have been identified as dangerous activities; this Convention also has a list of dangerous substances in Annex I. See also Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, *Official Journal of the European Union*, No. L 143, 30 April 2004, p. 56.

[317] See *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 149–151 (commentary to article 1 of the draft articles on prevention).

[318] *Yearbook ... 1973*, vol. II, document A/9010/Rev.1, p. 169, para. 38.

[319] See *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 150 (paragraph (6) of the commentary to article 1). See also M. B. Akehurst, "International liability for injurious consequences arising out of acts not prohibited by international law", *Netherlands Yearbook of International Law*, vol. 16 (1985), pp. 3–16; A. E. Boyle, "State responsibility and international liability for injurious consequences of acts not prohibited by international law: a necessary distinction?", *International and Comparative Law Quarterly*, vol. 39 (1990), pp. 1–26; K. Zemanek, "State responsibility and liability", in W. Lang, H. Neuhold and K. Zemanek (eds.), *Environmental Protection and International Law*, London, Graham and Trotman/Martinus Nijhoff, 1991, p. 197; the second report on international liability for injurious consequences arising out of acts not prohibited by international law (prevention of transboundary harm from hazardous activities) by Special Rapporteur Pemmaraju Sreenivasa Rao, *Yearbook ... 1999*, vol. II (Part One), document A/CN.4/501, paras. 35–37; J. Barboza, "La responsabilité 'causale' à la Commission du droit international", *Annuaire français de droit international*, vol. 34 (1988), pp. 513–522; Ph. Cahier, "Le problème de la responsabilité pour risque en droit international", in *International Relations in a Changing World*, Leyden, Sijthoff, 1977, pp. 409–434;

a case, State responsibility could be invoked to implement not only the obligations of the State itself but also the civil responsibility or duty of the operator.[320] Indeed, this is well understood throughout the work on draft articles on prevention.[321]

(7) It is recognized that harm could occur despite implementation of the duties of prevention. Transboundary harm could occur for several other reasons not involving State responsibility. For instance, there could be situations where the preventive measures were followed but actually proved inadequate, or where the particular risk that caused transboundary harm could not be identified at the time of initial authorization and hence appropriate preventive measures were not envisaged.[322] In other words, transboundary harm could occur accidentally or it may take place in circumstances not originally anticipated. Further, harm could occur because of gradually accumulated adverse effects over a period of time. This distinction ought to be borne in mind for purposes of compensation. Because of problems of establishing a causal link between the hazardous activity and the damage incurred, claims in the latter case are not commonplace.[323]

(8) For the purpose of the present draft principles it is assumed that duties of due diligence under the obligations of prevention have been fulfilled. Accordingly, the focus of the present draft principles is on damage caused despite the fulfilment of such duties.

(9) The second criterion, implicit in the present provision on scope of application, is that activities covered by these principles are those that originally carried a "risk" of causing significant transboundary harm. As noted in paragraph (2) above, this risk element encompasses activities with a low probability of causing disastrous transboundary harm or a high probability of causing significant transboundary harm.[324]

(10) The third criterion is that the activities must involve "transboundary" harm. Thus, three concepts are embraced by the (extra)territorial element. The term "transboundary" harm comprises questions of "territory", "jurisdiction" and "control".[325] The activities must be conducted in the territory or otherwise in places within the jurisdiction or control of one State and have an impact in the territory or places within the jurisdiction or control of another State.

(11) It should be noted that the draft principles are concerned with "transboundary damage caused" by hazardous activities. In the present context, the reference to the broader concept of transboundary harm has been retained where the reference is only to the risk of harm and not to the subsequent phase where harm has actually occurred. The term "damage" is employed to refer to the latter phase. The notion of "transboundary damage" is introduced to denote specificity to the harm which occurred. The term also has the advantage of familiarity. It is the usual term used in liability regimes.[326] The word "transboundary"

C. G. Caubet, "Le droit international en quête d'une responsabilité pour les dommages résultant d'activités qu'il n'interdit pas", *Annuaire français de droit international*, vol. 29 (1983), pp. 99–120; D. Lévy, "La responsabilité pour omission et la responsabilité pour risque en droit international public", *Revue générale de droit international public*, vol. 32, No. 1 (1961), pp. 744–764; and P. Šturma, "La responsabilité en dehors de l'illicite en droit international économique", *Polish Yearbook of International Law*, vol. 20 (1993), pp. 91–112.

[320] See P.-M. Dupuy, *La responsabilité internationale des États pour les dommages d'origine technologique et industrielle*, Paris, Pedone, 1977; I. Brownlie, *System of the Law of Nations: State Responsibility, Part I*, Oxford, Clarendon Press, 1983, p. 50; A. Rosas, "State responsibility and liability under civil liability regimes", in O. Bring and S. Mahmoudi (eds.), *Current International Law Issues: Nordic Perspectives (Essays in honour of Jerzy Sztucki)*, Dordrecht, Martinus Nijhoff, 1994, p. 161; and F. Bitar, *Les mouvements transfrontaliers de déchets dangereux selon la Convention de Bâle. Étude des régimes de responsabilité*, Paris, Pedone, 1997, pp. 79–138. However, different standards of liability, burden of proof and remedies apply to State responsibility and liability. See also P.-M. Dupuy, "Où en est le droit international de l'environnement à la fin du siècle?", *Revue générale de droit international public*, vol. 101, No. 4 (1997), pp. 873–903; T. A. Berwick, "Responsibility and liability for environmental damage: a roadmap for international environmental regimes", *Georgetown International Environmental Law Review*, vol. 10, No. 2 (1998), pp. 257–267; and P.-M. Dupuy, "À propos des mésaventures de la responsabilité internationale des États dans ses rapports avec la protection internationale de l'environnement", in M. Prieur and C. Lambrechts (eds.), *Les hommes et l'environnement: quels droits pour le vingt et unième siècle? Études en hommage à Alexandre Kiss*, Paris, Frison-Roche, 1998, pp. 269–282.

[321] See *Yearbook ... 2002*, vol. II (Part Two), p. 90, para. 443.

[322] *Ibid*., para. 444.

[323] See P. Wetterstein, "A proprietary or possessory interest: A *conditio sine qua non* for claiming damages for environmental impairment?", in P. Wetterstein (ed.), *Harm to the Environment: the Right to Compensation and Assessment of Damage*, Oxford, Clarendon Press, 1997, pp. 29–54, at p. 30. See also H. Xue, *Transboundary Damage in International Law*, Cambridge University Press, 2003, pp. 19–105 and 113–182.

[324] See *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 152 (paragraph (1) of the commentary to draft article 2).

[325] *Ibid*., pp. 150–151 (paras. (7)–(12) of the commentary to draft article 1).

[326] "Damage" is defined in: article 2, paragraph 2 (*c*) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal; article 2, paragraph 2 (*d*) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters; article 2, paragraph 7 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment; article 1, paragraph 6 of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention); and article 1, paragraph 10 of the Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD). See also article 2, paragraph 2 of the 2004 European Parliament and the Council Directive 2004/35/CE on environmental liability with regard to prevention and remedying of environmental damage (footnote 316 above); and article I (*a*) of the Convention on the international liability for damage caused by space objects.

"Pollution damage" is defined in: article 1, paragraph 6 of the International Convention on Civil Liability for Oil Pollution Damage; article 1, paragraph 6 of the Convention as amended by the Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage (see also P. W. Birnie and A. E. Boyle, *Basic Documents on International Law and the Environment*, Oxford, Clarendon Press, 1995, pp. 91–106); article 1, paragraph 9 of the International Convention on Civil Liability for Bunker Oil Pollution Damage; and article 1, paragraph 6 of the International Convention on Civil Liability for Oil Pollution Damage resulting from the Exploration for and Exploitation of Seabed Mineral Resources.

For definition of "nuclear damage", see article I, paragraph 1 (*k*) of the Vienna Convention on civil liability for nuclear damage; article I, paragraph 1 (*k*) of the Convention as amended by article 2 of the Protocol to amend the Vienna Convention on civil liability for nuclear damage; article 1 of the Convention on Supplementary Compensation for Nuclear Damage; article I.B.vii) of the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982.

(*Continued on next page.*)

qualifies "damage" to stress the transboundary orientation of the scope of the present principles.

(12) Another important consideration which delimits the scope of application is that transboundary harm caused by State policies in trade, monetary, socio-economic or similar fields is excluded from the scope of the present principles.[327] Thus, significant transboundary harm must have been caused by the "physical consequences" of activities in question.

Principle 2. Use of terms

For the purposes of the present draft principles:

(*a*) "damage" means significant damage caused to persons, property or the environment; and includes:

(i) loss of life or personal injury;

(ii) loss of, or damage to, property, including property which forms part of the cultural heritage;

(iii) loss or damage by impairment of the environment;

(iv) the costs of reasonable measures of reinstatement of the property, or environment, including natural resources;

(v) the costs of reasonable response measures;

(*b*) "environment" includes: natural resources, both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors; and the characteristic aspects of the landscape;

(*c*) "hazardous activity" means an activity which involves a risk of causing significant harm;

(*d*) "State of origin" means the State in the territory or otherwise under the jurisdiction or control of which the hazardous activity is carried out;

(*e*) "transboundary damage" means damage caused to persons, property or the environment in the territory or in other places under the jurisdiction or control of a State other than the State of origin;

(*f*) "victim" means any natural or legal person or State that suffers damage;

(*g*) "operator" means any person in command or control of the activity at the time the incident causing transboundary damage occurs.

Commentary

(1) The present "Use of terms" seeks to define and set out the meaning of the terms or concepts used in the present draft principles. The definition of "damage" is crucial for the purposes of the present draft principles. The elements of damage are identified in part to set out the basis of claims for damage. Before identifying the elements of damage, it is important to note that damage, to be eligible for compensation, should reach a certain threshold. For example, the *Trail Smelter* award addressed an injury by fumes, when the case is of "serious consequences" and the injury is established by clear and convincing evidence.[328] The *Lake Lanoux* award made reference to serious injury.[329] A number of conventions have also referred to "significant", "serious" or "substantial" harm or damage as the threshold for giving rise to legal claims.[330] "Significant" has also been used in other legal instruments and domestic law.[331] The threshold is designed to prevent frivolous or vexatious claims.

(*Footnote 326 continued.*)

See also article 1, paragraph 15 of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA), which defines damage to the Antarctic environment or dependent or associated ecosystems; and the Convention on the Law of the Non-Navigational Uses of International Watercourses which seeks in article 7 to "prevent the causing of significant harm". Article 2 (*b*) of Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising From Environmental Emergencies defines "environmental emergency" as "any accidental event that … results in, or imminently threatens to result in, any significant and harmful impact on the Antarctic environment".

[327] See *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 151 (paragraphs (16)–(17) of the commentary to article 1 of the draft articles on prevention).

[328] *Trail Smelter* (see footnote 226 above), at p. 1965.

[329] *Lake Lanoux Arbitration (France* v. *Spain)*, UNRIAA, vol. XII (Sales No. 1963.V.3), p. 281.

[330] See, for example, article 4, paragraph 2 of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA); paragraphs 1 and 2 of article 2 of the Convention on Environmental Impact Assessment in a Transboundary Context; article 1 (*d*) of the Convention on the Transboundary Effects of Industrial Accidents; and article 7 of the Convention on the Law of the Non-Navigational Uses of International Watercourses. See also P. N. Okowa, *State Responsibility for Transboundary Air Pollution in International Law*, Oxford University Press, 2000, p. 176; and R. Lefeber, *Transboundary Environmental Interference and the Origin of State Liability* , The Hague, Kluwer Law International, 1996, pp. 86–89, who notes the felt need for a threshold and examines the rationale for and the possible ways of explaining the meaning of the threshold of "significant harm". See also J. G. Lammers, *Pollution of International Watercourses: a Search for Substantive Rules and Principles of Law*, The Hague, Martinus Nijhoff Publishers, 1984, pp. 346–347; and R. Wolfrum, "Purposes and principles of international environmental law", *German Yearbook of International Law*, vol. 33 (1990), pp. 308–330, at p. 311. As a general rule, noting the importance of a threshold of damage for triggering claims for restoration and compensation, while considering environmental damage, it is suggested that "the more the effects deviate from the state that would be regarded as being sustainable and the less foreseeable and limited the consequential losses are, the closer the effects come to the threshold of significance". This is to be determined against a "baseline condition", which States generally define or should define (R. Wolfrum, Ch. Langenfeld and P. Minnerop, *Environmental Liability in International Law: Towards a Coherent Conception*, Berlin, Erich Schmidt Verlag, 2005, p. 501).

[331] See, for example, article 5 of the draft convention on industrial and agricultural uses of international rivers and lakes, prepared by the Inter-American Juridical Committee in 1965 (Organization of American States, *Ríos y lagos internacionales (utilización para fines agrícolas e industriales)*, 4th ed. rev. (OEA/Ser.1/VI, CIJ-75 Rev.2), Washington D.C., 1971, p. 132; Guidelines on responsibility and liability regarding transboundary water pollution, elaborated by the United Nations Economic Commission for Europe in 1990 (ENVWA/R.45, annex); article X of the Helsinki Rules on the Uses of the Waters of International Rivers (International Law Association, *Report of the Fifty-second Conference, Helsinki, 1966*, London, 1967, p. 496); article 16 of the Berlin Rules on Equitable Use and Sustainable Development of Waters (*ibid., Report of the Seventy-First Conference, Berlin, 16–21 August 2004*, London, 2004, p. 334); paragraphs 1 and 2 of General Assembly resolution 2995 (XXVII) of 15 December 1972 concerning cooperation between States in the field of the environment; paragraph 6 of the annex to OECD Council recommendation C(74)224 of 14 November 1974 on principles concerning transfrontier pollution (OECD, *OECD*

(2) The term "significant" is understood to refer to something more than "detectable" but need not be at the level of "serious" or "substantial".[332] The harm must lead to a real detrimental effect on matters such as, for example, human health, industry, property, environment or agriculture in other States. Such detrimental effects must be susceptible of being measured by factual and objective standards. The ecological unity of the planet does not correspond to political boundaries. In carrying out lawful activities within their own territories, States have impacts on each other. These mutual impacts, so long as they have not reached the level of "significant", are considered tolerable and do not fall within the scope of the present draft principles.

(3) The determination of "significant damage" involves both factual and objective criteria, and a value determination. The latter is dependent on the circumstances of a particular case and the period in which it is made. For instance, a deprivation which is considered significant in one region may not necessarily be so in another. A certain deprivation at a particular time might not be considered "significant" because scientific knowledge or human appreciation at that specific time might have considered such deprivation tolerable. However, that view might later change and the same deprivation might then be considered "significant damage". For instance, the sensitivity of the international community to air and water pollution levels has been constantly changing.

(4) Paragraph (*a*) defines "damage" as significant damage caused to persons, property or the environment. Subparagraphs (i) and (ii) cover personal injury and property damage, including some aspects of consequential economic loss, as well as property, which forms part of the national cultural heritage, which may be State property.

(5) Damage does not occur in isolation or in a vacuum. It occurs to somebody or something; it may be to a person or property. In subparagraph (i), damage to persons includes loss of life or personal injury. There are examples in domestic law[333] and treaty practice.[334] Even those liability regimes that exclude application of injury to persons recognize that other rules would apply.[335] Those regimes that are silent on the matter do not seem to entirely exclude the possible submission of a claim under this heading of damage.[336]

(6) In subparagraph (ii) damage to property includes loss of or damage to property. Property includes movable and immovable property. There are examples in domestic law[337] and in treaty practice.[338] Some liability regimes exclude claims concerning damage to property of the person liable on the policy consideration which seeks to deny a tortfeasor the opportunity to benefit from one's own wrongs. Article 2, paragraph 2 (*c*) (ii) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal, article 2, paragraph 7(*b*) of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment and article 2, paragraph 2 (*d*) (ii) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters contain provisions to this effect.

(7) Traditionally, proprietary rights have been more closely related to the private rights of the individual rather than rights of the public. An individual would face

and the Environment, Paris, 1986, p. 142, reprinted in ILM, vol. 14, No. 1 (January 1975), p. 246); the Memorandum of Intent constituting an agreement concerning transboundary air pollution, between the Government of the United States and the Government of Canada, of 5 August 1980 (United Nations, *Treaty Series*, vol. 1274, No. 21009, p. 235); and article 7 of the Agreement between Mexico and the United States of America on co-operation for the protection and improvement of the environment in the border area, signed on 14 August 1983 (*ibid*., vol. 1352, No. 22805, p. 71, reproduced in ILM, vol. 22, No. 5 (September 1983), p. 1025). The United States has also used the word "significant" in its domestic law dealing with environmental issues. See American Law Institute, *Restatement of the Law Third, The Foreign Relations Law of the United States*, vol. 2, St. Paul (Minnesota), American Law Institute Publishers, 1987, pp. 111–112.

[332] See *Yearbook ...2001*, vol. II (Part Two) and corrigendum, p. 152 (paragraphs (4)–(5) of the commentary to article 2 of the draft articles on prevention).

[333] Germany's Environmental Liability Act, for example, covers anyone who suffers death or personal injury. Finland's Act on Compensation for Environmental Damage, the Swedish Environmental Code, and Denmark's Act on Compensation for Environmental Damage all cover personal injury. See generally P. Wetterstein, "Environmental damage in the legal systems of the Nordic countries and Germany", in M. Bowman and A. Boyle (eds.), *Environmental Damage in International Law and Comparative Law: Problems of Definition and Valuation*, Oxford University Press, 2002, pp. 223–242.

[334] Some liability regimes provide as follows: article I, paragraph 1 (*k*) of the Vienna Convention on civil liability for nuclear damage defines nuclear damage to include "(i) loss of life, any personal injury or any loss of, or damage to, property …"; article I, paragraph 1(*k*) of the Protocol to amend the Vienna Convention on civil liability for nuclear damage also refers to "(i) loss of life or personal injury; (ii) loss of or damage to property"; article I.B.vii) of the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982, defines nuclear damage to include "1. loss of life or personal injury …; 2. loss of or damage to property …"; the Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD) defines the concept of "damage" in paragraph 10 of article 1 as "(a) loss of life or personal injury ...; (b) loss of or damage to property ..."; the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal defines "damage", in article 2, paragraph 2 (*c*), as: "(i) Loss of life or personal injury; (ii) Loss of or damage to property other than property held by the person liable in accordance with the present Protocol"; the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters defines damage in article 2 paragraph 2 (*d*), as: "(i) Loss of life or personal injury; (ii) Loss of, or damage to, property other than property held by the person liable in accordance with the Protocol"; and the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment defines damage in article 2, paragraph 7 as: "a. loss of life or personal injury; b. loss or damage to property other than to the installation itself or property held under the control of the operator, at the site of the dangerous activity".

[335] Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (see footnote 316 above) does not apply to cases of personal injury, to damage to private property or to any economic loss and does not affect any rights regarding such types of damages.

[336] Pollution damage is defined in article 1, paragraph 6 of the International Convention on Civil Liability for Oil Pollution Damage and in article 2, paragraph 3 of the 1992 Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage.

[337] For example, Finland's Act on Compensation for Environmental Damage covers damage to property, chapter 32 of the Swedish Environmental Code also provides for compensation for damage to property and Denmark's Act on Compensation for Environmental Damage covers damage to property.

[338] See the examples in footnote 334 above.

no difficulty to pursue a claim concerning his personal or proprietary rights. These are claims concerning possessory or proprietary interests which are involved in loss of life or personal injury or loss of or damage to property. Furthermore, tort law has also tended to cover damage that may relate to economic losses. In this connection, a distinction is often made between consequential and pure economic losses.[339]

(8) For the purposes of the present draft principles, consequential economic losses are covered under subparagraphs (i) and (ii). Such losses are the result of a loss of life or personal injury or damage to property. These would include loss of earnings due to personal injury. Such damage is supported in treaty practice[340] and under domestic law although different approaches are followed, including in respect of compensation for loss of income.[341] Other economic loss may arise that is not linked to personal injury or damage to property. In the absence of a specific legal provision for claims covering loss of income, it would be reasonable to expect that if an incident involving a hazardous activity directly causes loss of income, efforts would be made to ensure the victim is not left uncompensated.

(9) Subparagraph (ii) also covers property which forms part of cultural heritage. State property may be included in the national cultural heritage. It embraces a wide range of aspects, including monuments, buildings and sites, while natural heritage denotes natural features and sites and geological and physical formations. Their value cannot easily be quantifiable in monetary terms but lies in their historical, artistic, scientific, aesthetic, ethnological or anthropological importance or in their conservation or natural beauty. The 1972 Convention for the protection of world cultural and natural heritage has a comprehensive definition of "cultural heritage".[342] Not all civil liability regimes include aspects concerning cultural heritage under this head. For example, the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment includes in its definition of "environment", property which forms part of the cultural heritage and, to that extent, cultural heritage may also be embraced by the broader definition of "environment".[343]

(10) Respecting and safeguarding cultural property are primary considerations in times of peace as they are in times of armed conflict. This principle is asserted in the Convention for the Protection of Cultural Property in the Event of Armed Conflict. Moreover, international humanitarian law prohibits commission of hostilities directed against historical monuments and works of art which constitute the cultural heritage of peoples.[344]

(11) Subparagraphs (iii) to (v) deal with claims that are usually associated with damage to the environment. They may all be treated as parts of one whole concept. Together, they constitute the essential elements inclusive in a definition of damage to the environment. These subparagraphs are concerned with questions concerning damage to the

[339] See B. Sandvik and S. Suikkari, "Harm and reparation in international treaty regimes: an overview", in P. Wetterstein (ed.), *op. cit.* (footnote 323 above), p. 57. See generally E. H. P. Brans, *Liability for Damage to Public Natural Resources: Standing, Damage and Damage Assessment*, The Hague, Kluwer Law International, 2001, pp. 9–63. See also the eleventh report on international liability for injurious consequences arising out of acts not prohibited by international law of Special Rapporteur Julio Barboza (footnote 285 above).

[340] See, for example, article I (1) (*k*) of the Vienna Convention on civil liability for nuclear damage as modified by article 2, paragraph 2 of the Protocol to amend the Convention, which defines "nuclear damage" as including "each of the following to the extent determined by the law of the competent court– (iii) economic loss arising from loss or damage referred to in sub-paragraph (i) or (ii), insofar as not included in those sub-paragraphs, if incurred by a person entitled to claim in respect of such loss or damage; … (vii) 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 …". See also article 1 (*f*) of the Convention on Supplementary Compensation for Nuclear Damage, which covers each of the following to the extent determined by the law of the competent court: "(iii) economic loss arising from loss or damage referred to in sub-paragraph (i) or (ii), insofar as not included in those sub-paragraphs, if incurred by a person entitled to claim in respect of such loss or damage; … (vii) 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". Article I.B.vii) of the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982, defines "nuclear damage" as including "each of the following to the extent determined by the law of the competent court, (3) economic loss arising from loss or damage referred to in sub-paragraph 1 or 2 above insofar as not included in those subparagraphs, if incurred by a person entitled to claim in respect of such loss or damage".

[341] For example, under subsection 2702 (*b*) of the United States Oil Pollution Act any person may recover damages for injury to, or economic losses resulting from, the destruction of real or personal property which shall be recoverable by a claimant who owns or leases such property. The subsection also provides that any person may recover "damages equal to the *loss of profits or impairment of earning capacity** due to the injury, destruction, or loss of real property, personal property …" (*United States Code 2000 Edition containing the general and permanent laws of the United States, in force on January 2, 2001*, vol. 18, Washington D.C., United States Government Printing Office, 2001, p. 694). Similarly, section 252 of the German Civil Code provides that any loss of profit is to be compensated.

[342] Article 1 defines "cultural heritage" for purposes of the Convention as:

"— monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

— groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;

— sites: works of man or the combined works of nature and of man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view."

See also the definition of "cultural property" in article 1 of the Convention for the Protection of Cultural Property in the Event of Armed Conflict, which essentially covers movable and immovable property of great importance to the cultural heritage of peoples. See also the Convention on the means of prohibiting and preventing the illicit import, export and transfer of ownership of cultural property; and the Convention for the Safeguarding of the Intangible Cultural Heritage.

[343] See also article 1, paragraph 2 of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

[344] See article 53 of the Protocol additional to the Geneva Conventions of 12 August 1949, and relating to the protection of victims of international armed conflicts and article 16 of the Protocol additional to the Geneva Conventions of 12 August 1949, and relating to the protection of victims of non-international armed conflicts. See also the Hague Conventions respecting the Laws and Customs of War on Land, particularly Convention IV (articles 27 and 56 of the Regulations concerning the Laws and Customs of War on Land, in annex to Conventions II and IV of 1899 and 1907) and Convention IX concerning Bombardment by Naval Forces in Time of War (article 5).

environment *per se*. This is damage caused by the hazardous activity to the environment itself with or without simultaneously causing damage to persons or property, and hence is independent of any damage to such persons and property. The broader reference to claims concerning the environment incorporated in subparagraphs (iii)–(v) thus not only builds upon trends that have already become prominent as part of recently concluded international liability regimes,[345] but opens up possibilities for further developments of the law for the protection of the environment *per se*.[346]

(12) An oil spill off a seacoast may immediately lead to lost business for the tourism and fishing industry within the precincts of the incident. Such claims have led to claims of pure economic loss in the past without much success. However, some liability regimes now recognize this head of compensable damage.[347] Article 2 (*d*) (iii) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters and article 2, paragraph 2 (*d*) (iii) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal cover loss of income directly deriving from an economic interest in any use of the environment, incurred as a result of impairment of the environment, taking into account savings and costs.[348] In the case of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, such interest should be a "legally protected interest". Examples also exist at the domestic level.[349]

(13) Subparagraph (iii) relates to the form that damage to the environment would take. This would include "loss or damage by impairment". Impairment includes injury to, modification, alteration, deterioration, destruction or loss. This entails diminution of quality, value or excellence in an injurious fashion. Claims concerning loss of income directly deriving from an economic interest in any use of the environment, incurred as a result of impairment of the environment, may fall under this heading.

(14) In other instances of damage to the environment *per se*, it is not easy to establish standing. Some aspects of the environment do not belong to anyone, and are generally considered to be common property (*res communis omnium*) not open to private possession, as opposed

[345] For an analysis of these developments, see L. de la Fayette, "The concept of environmental damage in international liability regimes", in Bowman and Boyle (eds.), *op. cit.* (footnote 333 above) pp. 149–189. See also Brans, *op. cit.* (footnote 339 above), chap. 7, concerning international civil liability for damage to natural resources.

[346] Italian law, for example, appears to go further in recognizing damage to the environment *per se* and Italy is also a signatory to the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment. In the *Patmos* case, Italy lodged a claim for 5,000 million lire before the court of Messina, Italy, for ecological damage caused to its territorial waters as a result of 1,000 tonnes of oil spilled into the sea following a collision between the Greek oil tanker Patmos and the Spanish tanker Castillo de Monte Aragon on 21 March 1985. While the lower Court rejected its claim, the higher Court on appeal upheld its claim in *Patmos II*. According to the Court,

"although the notion of environmental damage cannot be grasped by resorting to any mathematical or accounting method, it can be evaluated in the light of the economic relevance that the destruction, deterioration, or alteration of the environment has *per se* and for the community, which benefits from environmental resources and, in particular, from marine resources in a variety of ways (food, health, tourism, research, biological studies)" (A Bianchi, "Harm to the environment in Italian practice: the interaction of international law and domestic law", in P. Wetterstein (ed.), *op. cit.* (see footnote 323 above), p. 116).

Noting that these benefits are the object of protection of the State, it was held that the State can claim, as a trustee of the community, compensation for the diminished economic value of the environment. The Court also observed that the loss involved not being assignable any market value, compensation can only be provided on the basis of an equitable appraisal. The Court, after rejecting the report received from experts on the quantification of damages, which attempted to quantify the damage on the basis of the nekton (fish) which the biomass could have produced had it not been polluted, resorted to an equitable appraisal and awarded 2,100 million lire. Incidentally, this award fell within the limits of liability of the owner, as set by the IOPC Fund, and was not appealed or contested, see generally Bianchi, *loc. cit.* (above), pp. 113–129, at p. 103. See also M. C. Maffei, "The compensation for ecological damage in the '*Patmos*' case", in F. Francioni and T. Scovazzi (eds.), *International Responsibility for Environmental Harm*, London, Graham and Trotman, 1991.

[347] See Wetterstein, "A proprietary or possessory interest ... ", *loc. cit.* (footnote 323 above), p. 37. On the need to limit the concept of "directly related" "pure economic loss" with a view not to open floodgates or enter "damages lottery" encouraging indeterminate liability which will then be a disincentive to get proper insurance or economic perspective, see L. Bergkamp, *Liability and Environment: Private and Public Law Aspects of Civil Liability for Environmental Harm in an International Context*, The Hague, Kluwer, 2001, pp. 346–350. It is also suggested that such an unlimited approach may limit "the acceptance of the definition of damage and thus, it has to be solved on the national level" (Wolfrum, Langenfeld and Minnerop, *op. cit.* (footnote 330 above) p. 503).

Directive 2004/35/CE of the European Parliament and of the Council covers environmental damage in article 2 (see footnote 316 above).

[348] See also article 1, paragraph 1 (*k*) of the Vienna Convention on civil liability for nuclear damage as modified by article 2, paragraph 2 of the Protocol to amend the Convention, which states that nuclear damage includes each of the following damages "to the extent determined by the law of the competent court: … (v) 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 that environment, and insofar as not included in sub-paragraph (ii)". See also the Convention on Supplementary Compensation for Nuclear Damage, article 1 (*f*): "(v) 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 that environment, and insofar as not included in subparagraph (ii)". Article I.B.vii) of the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982 defines nuclear damage as "each of the following to the extent determined by the law of the competent court: … 5. loss of income deriving from a direct economic interest in any use or enjoyment of the environment, incurred as a result of a significant impairment of that environment, and insofar as not included in subparagraph 2". See also, for example, article 2, paragraph 7 *d* of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment; the Convention on the Transboundary Effects of Industrial Accidents (article 1 (*c*)); the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (articles 1–2); the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) (article 8, paragraph 2 (*a*), (*b*) and (*d*)); and the Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD) (article 10 (*c*)).

[349] Subsection 2702 (*b*) of the United States Oil Pollution Act provides that any person may recover "[d]amages equal to the *loss of profits or impairment of earning capacity** due to the injury, destruction, or loss of … natural resources" (see footnote 341 above). Finland's Act on Compensation for Environmental Damage includes pure economic loss, except where such losses are insignificant. Chapter 32 of the Swedish Environmental Code also provides for pure economic loss. Pure economic loss not caused by criminal behaviour is compensable only to the extent that it is significant. Denmark's Act on Compensation for Environmental Damage covers economic loss and reasonable costs for preventive measures or for the restoration of the environment. See generally Wetterstein, "Environmental damage in the legal systems … ", *loc. cit. (*footnote 333 above*),* pp. 222–242.

to *res nullius*, that is, property not belonging to anyone but open to private possession. A person does not have an individual right to such common property and would not ordinarily have standing to pursue a claim in respect of damage to such property.[350] Moreover, it is not always easy to appreciate who may suffer loss of ecological or aesthetic values or be injured as a consequence for purposes of establishing a claim. States instead may hold such property in trust, and usually public authorities and more recently, public interest groups, have been given standing to pursue claims.[351]

(15) It may be noted that the references to "costs of reasonable measures of reinstatement" in subparagraph (iv) and reasonable costs of clean-up associated with the "costs of reasonable response measures" in subparagraph (v) are recent concepts. These elements of damage have gained recognition because, as noted by one commentator, "there is a clear shift towards a greater focus on damage to the environment *per se*, rather than primarily on damage to persons and to property".[352] Subparagraph (iv) includes in the concept of damage an element of the type of compensation that is available, namely reasonable costs of measures of reinstatement. Recent treaty practice[353] and domestic law[354] has tended to acknowledge the importance of such measures, but has left it to domestic law to indicate who may be entitled to take such measures. Such measures have been described as any reasonable measures aiming to assess, reinstate or restore damaged or destroyed components of the environment or where this is not possible, to introduce, where appropriate, the equivalent of these components into the environment.[355]

(16) The reference to "reasonable" is intended to indicate that the costs of such measures should not be excessively disproportionate to the usefulness resulting from the measure. In the *Zoe Colocotroni case*, the United States First Circuit Court of Appeals stated:

> [Recoverable costs are costs] reasonably to be incurred ... to restore or rehabilitate the environment in the affected area to its pre-existing condition, or as close thereto as is possible without grossly disproportionate expenditures. The focus in determining such a remedy should be [on] the steps a reasonable and prudent sovereign or agency would take to mitigate the harm done by the pollution, with attention to such factors as technical feasibility, harmful side effects, compatibility with or duplication of such regeneration as is naturally to be expected, and the extent to which efforts beyond a certain point would become either redundant or disproportionately expensive.[356]

(17) Subparagraph (v) includes costs of reasonable response measures in the concept of damage as an element of available compensation. Recent treaty practice has tended to acknowledge the importance of such measures, but has left it to domestic law to indicate who may be entitled to take such measures.[357] Such measures include

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[350] In *Burgess* v. *M/V Tamano*, the court noted that "[i]t is also uncontroverted that the right to finish or to harvest clams … is not the private right of any individual, but is a public right held by the State 'in trust for the common benefit of the people'" (opinion of 27 July 1973, United States District Court, Maine, *Federal Supplement*, vol. 370 (1973), p. 247).

[351] Under the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), United States Code Annotated, title 42, chapter 103, sections 9601 *et seq.*; the Clean Water Act of 1977, *ibid.*, title 33, chapter 26, section 1251; the Oil Pollution Act of 1990 (see footnote 341 above), sections 2701 *et seq.*, the United States "Congress empowered government agencies with management jurisdiction over natural resources to act as trustees to assess and recover damages ... [t]he public trust is defined broadly to encompass 'natural resources' ... belonging to, managed by, held in trust by, appertaining to or otherwise controlled by Federal, state or local governments or Indian tribes".

[352] De la Fayette, *loc. cit.* (footnote 345 above), at pp. 166–167.

[353] See, for example, article 1, paragraph 1 (*k*) (iv) of the Vienna Convention on civil liability for nuclear damage as modified by article 2, paragraph 2 of the Protocol to amend the Convention: "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 insofar as not included in sub-paragraph (ii)"; and article I.B.vii of the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982: "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 insofar as not included in sub-paragraph 2". Article 1, paragraph 6 of the International Convention on Civil Liability for Oil Pollution Damage refers to "impairment of the environment other than loss of profit from such impairment", and specifies that compensation for such impairment "shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken". See also article 2, paragraph 2 (*c*) (iv) and (*d*) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal; articles 2, 7 (*c*) and 8 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment; and article 2, paragraph 2 (*d*) (iv) and (*g*) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters.

[354] German law allows for reimbursement of reasonable costs of reinstatement and restoration of environmental damage through making good the loss suffered by individuals but that may also involve restoring the environment to its *status quo*. Section 16 of Germany's Environmental Liability Act and section 32 of the German Genetic Engineering Act provide that in the event of impairment of a natural complex, section 251 (2) of the German Civil Code is to be applied with the proviso that the expenses of restoring the *status quo* shall not be deemed unreasonable merely because it exceeds the value of the object concerned. See Wolfrum, Langenfeld and Minnerop, *op. cit.* (footnote 330 above), pp. 223–303 ("Part 5: Environmental liability law in Germany (Grote/Renke)"), at p. 278.

[355] It may be noted that in the context of the work of the UNCC, a recent decision sanctioned compensation in respect of three projects: for loss of rangeland and habitats, Jordan received $160 million; for shoreline preserves, Kuwait got $8 million; and Saudi Arabia was awarded $46 million by way of replacing ecological services that were irreversibly lost in the wake of the 1991 Gulf War. See the report and recommendations made by the Panel of Commissioners concerning the fifth instalment of "F4" claims (S/AC.26/2005/10), technical annexes I–III, See also P. H. Sand, "Compensation for environmental damage from the 1991 Gulf War", *Environmental Policy and Law*, vol. 35, No. 6 (December 2005), pp. 244–249, at p. 247.

[356] *Commonwealth of Puerto Rico,* et al. v. *Zoe Colocotroni*, et al., 628 F.2d, p. 652, United States Court of Appeals, First Circuit, 1980, cited in C. de la Rue, "Environmental damage assessment", in R. P. Kröner (ed.), *Transnational Environmental Liability and Insurance*, London, Graham and Trotman, 1993, p. 72.

[357] See, for example, article I, paragraph 1 (*k*) (vi) of the Vienna Convention on civil liability for nuclear damage as modified by article 2, paragraph 2 of the Protocol to amend the Convention: "the costs of preventive measures, and further loss or damage caused by such measures"; the Convention on Supplementary Compensation for Nuclear Damage, article 1 (*f*) (vi): "the costs of preventive measures, and further loss or damage caused by such measures"; and the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982, article I.B.vii): "the costs of preventive measures, and further loss or damage caused by such measures, in the case of subparagraphs 1 to 5 above, to the extent that the loss or damage arises out of or results from ionising radiation emitted by any source of radiation inside a nuclear installation, or emitted from nuclear fuel or radioactive products or waste". Article 1, paragraph 6 of the 1992 Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage refers to costs of preventive measures and further loss or damage caused by preventive measures.

any reasonable measures taken by any person including public authorities, following the occurrence of the transboundary damage, to prevent, minimize or mitigate possible loss or damage or to arrange for environmental clean-up. The response measures must be reasonable.

(18) Recent trends are also encouraging in allowing compensation for loss of "non-use value" of the environment. There is some support for this claim from the Commission itself when it adopted its draft articles on State responsibility for internationally wrongful acts, even though it is admitted that such damage is difficult to quantify.[358] The recent decisions of the United Nations Compensation Commission (UNCC) in opting for a broad interpretation of the term "environmental damage" is a pointer of developments to come. In the case of the "F4" category of environmental and public health claims, the F4 Panel of the UNCC allowed claims for compensation for damage to natural resources without commercial value (so-called "pure" environmental damage) and also claims where there was only a temporary loss of resource use during the period prior to full restoration.[359]

(19) Paragraph (*b*) defines "environment". Environment could be defined in different ways for different purposes and it is appropriate to bear in mind that there is no universally accepted definition. It is considered useful, however, to offer a working definition for the purposes of the present draft principles. It helps to put into perspective the scope of the remedial action required in respect of environmental damage.[360]

(20) "Environment" could be defined in a restricted way, limiting it exclusively to natural resources, such as air, soil, water, fauna and flora, and their interaction. A broader definition could embrace environmental values also. The Commission has opted to include in the definition the latter, also encompassing non-service values such as aesthetic aspects of the landscape.[361] This includes the enjoyment of nature because of its natural beauty and its recreational attributes and opportunities associated with it. This broader approach is justified by the general and residual character of the present draft principles.[362]

(21) Moreover, the Commission in taking such a holistic approach is, in the words of the ICJ in the *Gabčíkovo–Nagymaros Project* case:

> mindful that, in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage.[363]

(22) Furthermore, a broader definition would attenuate any limitation imposed by the remedial responses acceptable in the various liability regimes and as reflected in commentary in respect of subparagraphs (iv) and (v) above.

(23) Thus, the reference in paragraph (*b*) to "natural resources … and the interaction" of its factors embraces the idea of a restricted concept of environment within a protected ecosystem,[364] while the reference to "the characteristic aspects of the landscape" denotes an acknowledgement of a broader concept of environment.[365] The

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See also article 2, paragraph 2 (*c*) (v) and (*d*) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal; article 2, paragraphs 7 (*d*) and 9 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment; and article 2, paragraph 2 (*d*) (v) and (*h*) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters. Article 2 (*f*) of Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising From Environmental Emergencies defines response action as "reasonable measures taken after an environmental emergency has occurred to avoid, minimise or contain the impact of that environmental emergency, which to that end may include clean-up in appropriate circumstances, and includes determining the extent of that emergency and its impact".

[358] "[E]nvironmental damage will often extend beyond that which can be readily quantified in terms of clean-up costs and property devaluation. Damage to such environmental values (biodiversity, amenity, etc.—sometimes referred to as 'non-use values') is, as a matter of principle, no less real and compensable than damage to property, though it may be difficult to quantify" (*Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 101 (para. (15) of the commentary to article 36)).

[359] See the report and recommendations made by the Panel of Commissioners concerning the fifth instalment of "F4" claims (footnote 355 above). See also Sand, "Compensation for environmental damage …", *loc. cit.* (*ibid.*), p. 247. Elaborated in five instalment reports, the awards recommended by the F4 Panel and approved without change by the Governing Council amount to $5.26 billion, "the largest … in the history of international environmental law" (Sand, "Compensation for environmental damage…", *loc. cit.* (*ibid.*), p. 245). See also the *Guidelines for the Follow-up Programme for Environmental Awards* of the UNCC (*ibid.*), pp. 276–281.

[360] See the Communication from the Commission to the Council and Parliament and the Economic and Social Committee: Green Paper on remedying environmental damage, COM (93) 47 final, of 14 May 1993, p. 10.

[361] For a philosophical analysis underpinning a regime for damage to biodiversity, see M. Bowman, "Biodiversity, intrinsic value and the definition and valuation of environmental harm", in Bowman and Boyle (eds.), *op. cit.* (footnote 333 above), pp. 41–61. Article 2 of the Convention for the protection of the world cultural and natural heritage defines "natural heritage" as "natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view; geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation; natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty".

[362] For a concise discussion of the differing approaches on the definition of environmental damage, see Ph. Sands, *Principles of International Environmental Law*, 2nd ed., Cambridge University Press, 2003, pp. 876–878.

[363] *Gabčíkovo–Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 7, at p. 78, para. 140. The Court in this connection also alluded to the need to keep in view the inter-generational and intra-generational interests and the contemporary demand to promote the concept of sustainable development.

[364] Under article 2 of the Convention on Biological Diversity, "'[e]cosystem' means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit". Under article 1, paragraph 15 of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA),

> "'[d]amage to the Antarctic environment or dependent or associated ecosystems' means any impact on the living or non-living components of that environment or those ecosystems, including harm to atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to this Convention".

[365] Article 2, paragraph 10 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment contains a non-exhaustive list of components of the environment which includes: "natural resources both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors; property which forms part of the cultural heritage; and the characteristic

(*Continued on next page.*)

definition of "natural resources" covers living and non-living natural resources, including their ecosystems.

(24) Paragraph (*c*) defines "hazardous activity" by reference to any activity which has a risk of causing transboundary harm. It is understood that such risk of harm should be through its physical consequences, thereby excluding such impacts as may be caused by trade, monetary, socio-economic or fiscal policies. The commentary concerning the scope of application of these draft principles above has explained the meaning and significance of the terms involved.

(25) Paragraph (*d*) defines the State of origin. This means the State in the territory or otherwise under jurisdiction or control of which the hazardous activity is carried out. The term "territory", "jurisdiction", or "control" is understood in the same way as in the draft articles on prevention.[366] Other terms are also used for the purpose of the present principles. They include, as defined under the draft articles on prevention, the "State likely to be affected" (a State on whose territory or in other places under whose jurisdiction or control there is the risk of significant transboundary harm) and there may be more than one such State likely to be affected in relation to any given situation of transboundary damage. The draft principles also use the term "States concerned" (the State of origin, any State affected and any State likely to be affected). "State affected" is not defined by the draft articles on prevention. For the purposes of the present draft principles it would be the States in whose territory, or in places under jurisdiction or control of which, damage occurs as a result of an incident concerning a hazardous activity in the State of origin. More than one State may be so affected. These terms have not been defined in the "Use of terms" for reasons of balance and economy.

(26) Paragraph (*e*) defines "transboundary damage". It refers to damage occurring in one State because of an accident or incident involving a hazardous activity with effect in another State. This concept is based on the well-accepted notions of territory, jurisdiction or control by a State. In that sense, it refers to damage caused in the territory or in other places outside the territory but under the jurisdiction or control of a State other than the State in the territory or otherwise under the jurisdiction or control of which the hazardous activities are carried out. It does not matter whether or not the States in question share a common border. This definition includes, for example, activities conducted under the jurisdiction or control of a State such as on its ships or platforms on the high seas, with effects on the territory of another State or in places under its jurisdiction or control. However, it goes without stating that some other possibilities could also be involved, which may not be readily contemplated.

(27) The definition is intended to clearly identify and distinguish a State under whose jurisdiction or control an activity covered by these principles is conducted, from a State which has suffered the injurious impact.

(28) As is often the case with incidents falling within the scope of the present draft principles, there may be victims both within the State of origin and within the other States where damage is suffered. In the disbursement of compensation, particularly in terms of the funds expected to be made available to victims as envisaged in draft principle 4 below, some funds may also be made available for damage suffered in the State of origin. Article XI of the Convention on Supplementary Compensation for Nuclear Damage envisages such a system.

(29) Paragraph (*f*) defines "victim". The definition includes natural and legal persons, and includes the State as custodian of public property.[367] This definition is linked to and may be deduced from the definition of damage in paragraph (*a*) which includes damage to persons, property or the environment.[368] A person who suffers personal injury or damage or loss of property would be a victim for the purposes of the draft principles. A group of persons or a municipality ("*commune*") could also be a victim. In the *People of Enewetek* case, the Marshall Islands Nuclear Claims Tribunal, established under the 1987 Marshall Islands Nuclear Claims Tribunal Act, considered questions of compensation in respect of the people of Enewetek for past and future loss of use of the Enewetak Atoll; for restoration of Enewetak to a safe and productive state; and for the hardships suffered by the people of Enewetak as a result of their relocation attendant to their loss of use occasioned by the nuclear tests conducted on the atoll.[369] In the *Amoco Cadiz* litigation, following the Amoco Cadiz supertanker disaster off Brittany, the French administrative *départements* of Côtes du Nord and Finistère and numerous "*communes*", and various French individuals, businesses and associations sued the owner of the Amoco Cadiz, and its parent company in the United States. The claims involved lost business. The French

(*Footnote 365 continued.*)

aspects of the landscape"; article 1 (*c*) of the Convention on the Transboundary Effects of Industrial Accidents refers to the adverse consequences of industrial accidents on "(i) [h]uman beings, flora and fauna; (ii) [s]oil, water, air and landscape; (iii) [t]he interaction between the factors in (i) and (ii); (iv) [m]aterial assets and cultural heritage, including historical monuments"; article 1, paragraph 2 of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes says that "effects on the environment include effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; they also include effects on the cultural heritage or socio-economic conditions resulting from alterations to those factors".

[366] *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 150–151 (paras. (7)–(10) of the commentary to draft article 1).

[367] On the contribution of Edith Brown Weiss to the development of the concept of "stewardship" or "trusteeship" as striking "a deep chord with Islamic, Judeo-Christian, African, and other traditions", and for the view that "[s]ome forms of public trusteeships are incorporated in most legal systems" including the United Kingdom and India, see R. Mushkat, *International Environmental Law and Asian Values: Legal Norms and Cultural Influences*, Vancouver, UBC Press, 2004, p. 18. See also J. Razzaque, *Public Interest Environmental Litigation in India,Pakistan and Bangladesh*, The Hague, Kluwer Law International, 2004, p. 424, for the role of public trust doctrine in Bangladesh, India and Pakistan.

[368] In respect of international criminal law, see the Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power, General Assembly resolution 40/34 of 29 November 1985. See also the Rome Statute of the International Criminal Court (article 79).

[369] *In the Matter of the People of Enewetak*, ILM, vol. 39, No. 5 (September 2000), pp. 1214 *et seq*. In December 1947, the population of Enewetak was moved from Enewetak Atoll to Ujelang Atoll. At the time of the move, the acreage of the Enewetek Atoll was 1,919.49 acres. Upon their return on 1 October 1980, 43 tests of atomic devices had been conducted, at which time 815.33 acres were returned for use, another 949.8 acres were not available for use and an additional 154.36 acres had been vaporized (*ibid.*, p. 1214).

Government itself laid claims for recovery of pollution damages and clean-up costs.[370]

(30) The definition of "victim" is thus linked to the question of standing. Some liability regimes, such as the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment and the Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage, provide standing for NGOs.[371] The 1998 Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters also gives standing to NGOs to act on behalf of public environmental interests. Victims may also be those designated under national laws to act as public trustees to safeguard those resources and hence may have the legal standing to sue. The concept of "public trust" in many jurisdictions provides proper standing to different designated persons to lay claims for restoration and clean-up in case of any transboundary damage.[372] For example, under the United States Oil Pollution Act, such a right is given to the United States Government, a state, an Indian tribe and a foreign Government. Under the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended in 1986 by the Superfund Amendments and Reauthorization Act, *locus standi* has been given only to the federal Government, authorized representatives of states, as trustees of natural resources, or by designated trustees of Indian tribes. In some other jurisdictions, public authorities have been given a similar right of recourse. Thus, Norwegian law provides standing to private organizations and societies to claim restoration costs. In France, some environmental associations have been given the right to claim compensation in criminal cases involving violation of certain environmental statutes. The Supreme Court of India has entertained petitions from individuals or groups of individuals under its well-developed public interest litigation cases or class action suits to protect the environment from damage and has awarded compensation to victims of industrial and chemical pollution.[373]

(31) Paragraph (*g*) defines "operator". There is no general definition of "operator" under international law, although the term is employed in domestic law[374] and in treaty practice. In the latter, the nuclear damage regimes impose liability on the operator.[375] The definition of "operator" would vary, however, depending upon the nature of the activity. The channelling of liability onto one single entity, whether owner or operator, is the hallmark of strict liability regimes. Thus, some person other than the operator may be specifically identified as liable depending on the interests involved in respect of a particular hazardous activity. For example, at the 1969 Conference leading to the adoption of the 1969 International Convention on Civil Liability for Pollution Damage, the possibility existed of imposing liability on the shipowner or the cargo owner or both.[376] Under an agreed compromise, the shipowner was made strictly liable.[377]

(32) The draft principles envisage the definition of "operator" in functional terms and it is based on a factual determination as to who has use, control and direction of the object at the relevant time. Such a definition

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[370] See *In the Matter of: Oil Spill by the Amoco Cadiz off the coast of France on March 16, 1978*, United States Court of Appeals for the Seventh Circuit, 954 F.2d 1279. See also M. C. Maffei, *loc. cit.* (footnote 346 above), p. 381.

[371] See article 18 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment and article 12 of Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (footnote 316 above).

[372] P. Wetterstein, "A proprietary or possessory interest ...", *loc. cit.* (footnote 323 above), pp. 50–51.

[373] See Law Commission of India, *One Hundred Eighty Sixth Report on Proposal to Constitute Environmental Courts*, September 2003, p. 31 (available at http://lawcommissionofindia.nic.in/reports.htm). Articles 32 and 226 of the Indian Constitution provide for writ jurisdiction of the Supreme Court and the High Courts of India in this regard. The Courts have also used article 21 of the Indian Constitution and expanded the meaning of "life" to include the "right to a healthy environment". See also Razzaque, *op. cit.* (footnote 367 above), pp. 314–315, 429 and 443, where the author refers to arguments that the liberal standing provided before the courts of Bangladesh, India and Pakistan to bring environmental causes of action have led to the immobility and inefficiency in administration as well as the clogging of cases before the courts. This contribution is noteworthy for the overall assessment of progress made and reforms needed in the subcontinent to promote protection of the environment.

[374] For domestic law, see, for example, the 1990 Oil Pollution Act (footnote 341 above), in which the following individuals may be held liable: (*a*) a responsible party such as the owner or operator of a vessel, onshore and offshore facility, deepwater port and pipeline; (*b*) the "guarantor", the "person other than the responsible party, who provides evidence of financial responsibility for a responsible party"; and (*c*) third parties (individuals other than those mentioned in the first two categories, their agents or employees or their independent contractors, whose conduct is the sole cause of injury). See also the United States Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (footnote 351 above).

[375] See, for example, the Convention on third party liability in the field of nuclear energy and the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982: "'operator' in relation to a nuclear installation means to the person designated or recognised by the competent public authority as the operator of that installation" (common article 1 (vi)). See also the Vienna Convention on civil liability for nuclear damage (operator) (article IV); the Protocol to amend the Vienna Convention on civil liability for nuclear damage ("operator") (article 1 (*c*)); and the Convention on the Liability of Operators of Nuclear Ships ("operator of nuclear ships") (article II).

[376] See *Official Records of the International Legal Conference on Marine Pollution Damage, 1969*, Inter-Governmental Maritime Consultative Organization, 1973 (LEG/CONF/C.2/SR.2–13), cited in D. W. Abecassis and R. L. Jarashow, *Oil Pollution from Ships: International, United Kingdom and United States Law and Practice*, 2nd ed., London, Stevens and Sons, 1985, p. 253. Some regimes that attach liability to the shipowner are the 1992 Protocol to amend the International Convention on Civil Liability for Pollution Damage (art. III, para. 1); the International Convention on Civil Liability for Bunker Oil Pollution Damage (art. 3); and the 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention) (art. 7, para. 1).

[377] See also the Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD), which defines "carrier" with respect to inland navigation vessels as "the person who at the time of the incident controls the use of the vehicle on board which the dangerous goods are carried" (art. 1, para. 8); the International Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources defines the operator of a continental shelf installation to include, in the absence of a designation by a Contracting Party, "the person who is in overall control of the activities carried on at the installation" (art. 1, para. 3); and under the EU Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (footnote 316 above), which attaches liability to the operator, the term "operator" includes any natural or legal, private or public person who operates or controls the occupational activity.

is generally in conformity with notions prevailing in civil law.[378] More generally, while no basic definition of "operator" has been developed, "recognition has been gained for the notion that by operator is meant one in actual, legal or economic control of the polluting activity".[379]

(33) The term "command" connotes an ability to use or control some instrumentality. Thus it may include the person making use of an aircraft at the time of the damage, or the owner of the aircraft if he retained the rights of navigation.[380] It should be clear, however, that the term "operator" would not include employees who work or are in control of the activity at the relevant time.[381] The term "control" denotes power or authority to manage, direct, regulate, administer or oversee.[382] This could cover the person to whom decisive power over the technical functioning of an activity has been delegated, including the holder of a permit or authorization for such an activity or the person registering or notifying such an activity.[383] It may also include a parent company or other related entity, whether corporate or not, particularly if that entity has actual control of the operation.[384] An operator may be a public or private entity. It is envisaged that a State could be an operator for purposes of the present definition.

(34) The phrase "at the time of the incident" is intended to establish a connection between the operator and the transboundary harm. The looser and less concrete the link between the incident in question and the property claimed to have been damaged, the less certain the right to get compensation.

[378] See E. Reid, "Liability for dangerous activities: a comparative analysis", *International and Comparative Law Quarterly*, vol. 48 (October 1999), pp. 731–756, at p. 755.

[379] M.-L. Larsson, *The Law of Environmental Damage: Liability and Reparation*, The Hague, Kluwer Law International, 1999, p. 401.

[380] See the Convention on damage caused by foreign aircraft to third parties on the surface (article 12).

[381] See article 2 (*c*) of Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising From Environmental Emergencies: " 'operator' means any natural or juridical person, whether governmental or non-governmental, which organises activities to be carried out in the Antarctic Treaty area. An operator does not include a natural person who is an employee, contractor, subcontractor, or agent of, or who is in the service of, a natural or juridical person, whether governmental or non-governmental, which organises activities to be carried out in the Antarctic Treaty area, and does not include a juridical person that is a contractor or subcontractor acting on behalf of a State operator".

[382] The definition of "ship owner" in the International Convention on Civil Liability for Bunker Oil Pollution is broad. It includes "the registered owner, bareboat charterer, manager and operator of the ship" (art. 1, para. 3).

[383] See Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (footnote 316 above), article 2, para. 6.

[384] Under article 8 of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA), the primary liability lies with the *operator*, which is defined in article 1, paragraph 11 as "a Party; or an agency or instrumentality of a Party; or a juridical person established under the law of a Party; or a joint venture consisting exclusively of any combination of the foregoing". Pursuant to section 16.1 of the Standard clauses for exploration contract annexed to the Regulations on the Prospecting and Exploration for Polymetallic Nodules in the Area adopted by the International Seabed Authority on 13 July 2000, the *contractor* is "liable for the actual amount of any damage, including damage to the marine environment, arising out of its wrongful acts or omissions, and those of its employees, subcontractors, agents and all persons engaged in working or acting for them" (ISBA/6/A/18, Annex 4, Clause 16).

Principle 3. Purposes

The purposes of the present draft principles are:

(*a*) to ensure prompt and adequate compensation to victims of transboundary damage; and

(*b*) to preserve and protect the environment in the event of transboundary damage, especially with respect to mitigation of damage to the environment and its restoration or reinstatement.

Commentary

(1) The two-fold purpose of the present draft principles is to ensure protection to victims suffering damage from transboundary harm and to preserve and protect the environment *per se* as common resource of the community.

(2) The purpose of ensuring protection to victims suffering damage from transboundary harm has been an essential element from the inception of the study of the topic by the Commission. In his schematic outline, Robert Q. Quentin-Baxter focused on the need to protect victims, which required "measures of prevention that as far as possible avoid a risk of loss or injury and, in so far as that is not possible, measures of reparation", so that "an innocent victim should not be left to bear his loss or injury".[385] The former consideration is already addressed by the draft articles on prevention.[386]

(3) The notion of prompt and adequate compensation in paragraph (*a*) reflects the understanding and the desire that victims of transboundary damage should not have to wait long in order to be compensated. The importance of ensuring prompt and adequate compensation to victims of transboundary damage has its underlying premise in the *Trail Smelter* arbitration[387] and the *Corfu Channel* case,[388] as further elaborated and encapsulated in principle 21 of the Stockholm Declaration, namely:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.[389]

(4) The notion of liability and compensation for victims is also reflected in principle 22 of the Stockholm Declaration, wherein a common conviction is expressed that:

[385] *Yearbook ... 1982,* vol. II (Part One), document A/CN.4/360, p. 63, para. 53 (schematic outline, section 5, paras. 2–3).

[386] See footnote 292 above.

[387] "[U]nder the principles of international law, … no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequences and the injury is established by clear and convincing evidence" (*Trail Smelter* (see footnote 226 above), p. 1965).

[388] In this case, the Court stated that it was "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States" (*Corfu Channel* (see footnote 197 above), at p. 22).

[389] See footnote 312 above.

States shall co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction.[390]

(5) This is further addressed more broadly in principle 13 of the Rio Declaration:

States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.[391]

While the principles in these Declarations are not intended to give rise to legally binding obligations, they demonstrate aspirations and preferences of the international community.[392]

(6) Paragraph (*b*) gives a prominent place to the protection and preservation of the environment and to the associated obligations to mitigate the damage and to restore or reinstate the same to its original condition to the extent possible. Thus, it emphasizes the more recent concern of the international community to recognize protection of the environment *per se* as a value by itself without having to be seen only in the context of damage to persons and property. It reflects the policy to preserve the environment as a valuable resource not only for the benefit of the present generation but also for future generations. In view of its novelty and the common interest in its protection, it is important to emphasize that damage to environment *per se* could constitute damage subject to prompt and adequate compensation, which includes reimbursement of reasonable costs of response and restoration or reinstatement measures undertaken.

(7) The aim is not to restore or return the environment to its original state but to enable it to maintain its permanent functions. In the process it is not expected that expenditures disproportionate to the results desired would be incurred and such costs should be reasonable. Where restoration or reinstatement of the environment is not possible, it is reasonable to introduce the equivalent of those components into the environment.[393]

(8) In general terms, as noted above in the commentary on the "Use of terms" with respect to subparagraphs (iii)–(v), the earlier reluctance to accept liability for damage to environment *per se*, without linking such damage to damage to persons or property[394] is gradually disappearing.[395] In the case of damage to natural resources or the environment, there is a right of compensation or reimbursement for costs incurred by way of reasonable preventive, restoration or reinstatement measures. This is further limited in the case of some conventions to measures *actually* undertaken, excluding loss of profit from the impairment of the environment.[396]

(9) The State or any other public agency which steps in to undertake response or restoration measures may recover the costs later for such operations from the operator. For example, such is the case under the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The Statute establishes the Superfund with tax dollars to be replenished by the costs recovered from liable parties, to pay for clean-ups

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[390] *Idem.*

[391] See footnote 301 above.

[392] Birnie and Boyle note that "[t]hese principles all reflect more recent developments in international law and state practice; their present status as principles of general international law is more questionable, but the evidence of consensus support provided by the Rio Declaration is an important indication of their emerging legal significance" (Birnie and Boyle, *International Law ...*, *op. cit.* (footnote 306 above), at p. 105).

[393] For an analysis of the definition of "environment" and the compensable elements of damage to the environment, see the eleventh report on international liability for injurious consequences arising out of acts not prohibited by international law of the Special Rapporteur Julio Barboza (footnote 285 above), at p. 57, para. 28. For an interesting account of the problem of damage, definition of harm, damage, adverse effects and damage valuation, see M. A. Fitzmaurice, "International protection of the environment", *Collected Courses of the Hague Academy of International Law, 2001*, vol. 293 (2002), pp. 9 *et seq.*, at pp. 225–233.

[394] For contrasting results, see *Blue Circle Industries plc* v. *Ministry of Defence, The All England Law Reports 1998*, vol. 3, p. 385, and *Merlin and another* v. *British Nuclear Fuels plc, The All England Law Reports 1990*, vol. 3, p. 711.

[395] For difficulties involved in claims concerning ecological damage and prospects, see the *Patmos* and *Haven* cases. See generally A. Bianchi, "Harm to the environment in Italian practice: the interaction of international law and domestic law", in P. Wetterstein (ed.), *op. cit.* (footnote 323 above), p. 103, at 113–129. See also Maffei, *loc. cit.* (footnote 346 above), p. 381, at pp. 383–390; and D. Ong, "The relationship between environmental damage and pollution: marine oil pollution laws in Malaysia and Singapore", in M. Bowman and A. Boyle (eds.), *op. cit.* (footnote 333 above), p. 191, at 201–204. See also Sands, *op. cit.* (footnote 362 above), at pp. 918–922. See also the 1979 *Antonio Gramsci* incident and the 1987 *Antonio Gramsci* incident (IOPC Fund, *Report on the Activities of the International Oil Pollution Compensation Fund during 1980; ibid., Annual Report 1989*, p. 26; and *ibid., Annual Report 1990*, p. 27). See also, generally, W. Chao, *Pollution from the Carriage of Oil by Sea: Liability and Compensation*, London, Kluwer, 1996, pp. 361–366: the IOPC Fund resolution No. 3 of 17 October 1980 did not allow the court to assess compensation to be paid by the Fund "on the basis of an abstract quantification of damage calculated in accordance with theoretical models" (FUND/A/ES.1/13, Annex I). In the *Amoco Cadiz* case (see footnote 370 above), the Northern District Court of Illinois ordered Amoco Oil Corporation to pay $85.2 million in fines—$45 million for the costs of the spill and $39 million in interest. It denied compensation for non-economic damage. It thus dismissed claims concerning lost image and ecological damage. The Court noted: "it is true that the commune was unable for a time to provide clean beaches for the use of its citizens, and that it could not maintain the normal peace, quiet, and freedom from the dense traffic which would have been the normal condition of the commune absent the cleanup efforts", but concluded that the "loss of enjoyment claim by the communes is not a claim maintainable under French law" (Maffei, *loc. cit.* (footnote 346 above), p. 393). Concerning lost image, the Court observed that the plaintiffs' claim was compensable in measurable damage, to the extent that it could be demonstrated that this loss of image resulted in specific consequential harm to the *commune* by virtue of tourists and visitors who might otherwise have come staying away. Yet this is precisely the subject matter of the individual claims for damages by hotels, restaurants, campgrounds, and other businesses within the *communes*. As regards ecological damage, the Court dealt with problems of evaluating "the species killed in the intertidal zone by the oil spill" and observed that "this claimed damage is subject to the principle of *res nullius* and is not compensable for lack of standing of any person or entity to claim therefor" (*ibid.*, at pp. 393–394). See also *In the Matter of the People of Enewetak* (footnote 369 above), before the Marshall Islands Nuclear Claims Tribunal. The Tribunal had an opportunity to consider whether restoration was an appropriate remedy for loss incurred by the people of the Enewetak Atoll arising from nuclear tests conducted by the United States. It awarded clean-up and rehabilitation costs as follows: $22 million for soil removal; $15.5 million for potassium treatment; $31.5 million for soil disposal (causeway); $10 million for clean-up of plutonium; $4.51 million for surveys; and $17.7 million for soil rehabilitation and revegetation (pp. 1222–1223).

[396] See generally the commentary to draft principle 2 above.

if necessary. The United States Environmental Agency operates the Superfund and has the broad powers to investigate contamination, select appropriate remedial actions and either order liable parties to perform the clean-up or do the work itself and recover its costs.[397]

(10) In addition to the present purposes, the draft principles serve or imply the serving of other objectives, including: (*a*) providing incentives to the operator and other relevant persons or entities to prevent transboundary damage from hazardous activities; (*b*) resolving disputes among States concerning transboundary damage in a peaceful manner that promotes friendly relations among States; (*c*) preserving and promoting the viability of economic activities that are important to the welfare of States and peoples; and (*d*) providing compensation in a manner that is predictable, equitable, expeditious and cost-effective. Wherever possible, the draft principles should be interpreted and applied so as to further all these objectives.[398]

(11) In particular, the principle of ensuring "prompt and adequate" compensation by the operator should be perceived from the perspective of achieving "cost internalization", which constituted the core, in its origins, of the "polluter pays" principle. It is a principle that argues for internalizing the true economic costs of pollution control, clean-up and protection measures within the costs of the operation of the activity itself. It thus attempted to ensure that Governments did not distort the costs of international trade and investment by subsidizing these environmental costs. This policy was endorsed in the policy of OECD and the European Union. The contexts in which the principle was endorsed have envisaged their own variations in its implementation.

(12) In one sense, the "polluter pays" principle seeks to provide an incentive for the operator and other relevant persons or entities to prevent a hazardous activity from causing transboundary damage. The principle is referred to in a number of international instruments. It appears in very general terms as principle 16 of the Rio Declaration:

> National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.[399]

(13) In treaty practice, the principle has formed the basis for the construction of liability regimes on the basis of strict liability. This is the case with the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, which in the preamble has "regard to the desirability of providing for strict liability in this field taking into account the 'Polluter Pays' Principle". The Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, in its preamble, refers to the "polluter pays" principle as "a general principle of international environmental law, accepted also by the parties to" the Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the Convention on the Transboundary Effects of Industrial Accidents.[400] National jurisdictions have also placed reliance on it as playing a remedial and compensatory function.[401]

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[397] For an analysis of CERCLA, see W. D. Brighton and D. F. Askman, "The role of the government trustees in recovering compensation for injury to natural resources", in P. Wetterstein (ed.), *op. cit.* (footnote 323 above), pp. 177–206, at pp. 183–184.

[398] See also Bergkamp, *op. cit.* (footnote 347 above), p. 70, footnote 19, who has identified seven functions relevant to a liability regime, namely compensation, distribution of losses, allocation of risks, punishment, corrective justice, vindication or satisfaction, and deterrence and prevention.

[399] See footnote 301 above.

[400] It also finds reference, for example, in the International Convention on oil pollution preparedness, response and cooperation; the Convention for the protection of the marine environment of the North-East Atlantic (OSPAR Convention); the Convention on the Protection of the Marine Environment of the Baltic Sea Area; the Convention on the protection of the Black Sea against pollution; the Convention on the Protection and Use of Transboundary Watercourses and International Lakes; the Convention on the Transboundary Effects of Industrial Accidents; the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment; and Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (see footnote 316 above).

[401] In its report on the implementation of Agenda 21, the United Nations notes:

> "Progress has been made in incorporating the principles contained in the Rio Declaration … —including … the polluter pays principle …—in a variety of international and national legal instruments. While some progress has been made in implementing United Nations Conference on Environment and Development commitments through a variety of international legal instruments, much remains to be done to embody the Rio principles more firmly in law and practice."

(*Official Records of the General Assembly, Nineteenth Special Session, Supplement No. 2* (A/S-19/33), para. 14)

However, the "polluter pays" principle has been endorsed or is being endorsed in different national jurisdictions. The Supreme Court of India, in *Vellore Citizens' Welfare Forum* v. *Union of India and others* (see *All India Reporter, 1996*, vol. 83, p. 2715), noted that the precautionary principle, the "polluter pays" principle and the new burden of proof, supported by articles 21, 47, 48A, and 51A (*g*) of the Constitution of India, have become "part of the environmental law of the country" (Law Commission of India, *One Hundred Eighty Sixth Report on Proposal to Constitute Environmental Courts* (see footnote 373 above), p. 36). Access to justice, particularly in environmental matters, is an essential facet of article 21 of the Constitution of India. Australia and New Zealand already have environmental courts. Multiple provincial statutes of Canada regarding liability for environmental damage and subsequent remediation recognize the principle. In Spain, the courts have relied on the principle *cuius est commodum, eius est incommodum*—that is, the person who derives a benefit from an activity must also pay for resulting damage—to impose liability on persons for damage caused by mines, waste, damage as a result of loss of water, and toxic gas. In Japan, with regard to pollution caused by mining activities and marine pollution, the polluter pays to clean up the contamination to the commons and to restore the victim's property to its pre-damage state. The French legal system has endorsed in various forms the "polluter pays" principle. In *Époux Vullion* v. *Société immobilière Vernet-Saint Christophe et autres*, France's *Cour de cassation* held that "the owner's right to enjoy his property in the most absolute manner not prohibited by law or regulation is subject to his obligation not to cause damage to the property of anyone else which exceeds the normal incommodities of neighbourhood" (*Juris-Classeur périodique (La semaine juridique)*, 1971, II.16781. See the English translation by the Institute for Transnational Law of the School of Law of the University of Texas at Austin, available at www.utexas.edu/law/academics/centers/transnational). Sweden's Environmental Code of 1998, which came into force on 1 January 1999, makes the party who is liable for pollution to pay, to a reasonable extent, for investigations of possible pollution, clean-up and mitigation of damage. The test of reasonableness is determined with reference to (*a*) the length of time elapsed since the pollution occurred, (*b*) environmental risk involved and (*c*) the operator's contribution. Ireland enacted statutes to integrate, into domestic law, intentional treaties imposing strict liability for oil and hazardous waste spills by ships. Irish Courts have already begun to rely upon the "polluter pays" principle. In Brazil, strict liability is becoming a standard for damage caused by activities which are hazardous

(14) The principle has its limitations. It has thus been noted:

> The extent to which civil liability makes the polluter pay for environmental damage depends on a variety of factors. If liability is based on negligence, not only does this have to be proved, but harm which is neither reasonably foreseeable nor reasonably avoidable will not be compensated and the victim or the taxpayer, not the polluter, will bear the loss. Strict liability is a better approximation of the 'polluter pays' principle, but not if limited in amount, as in internationally agreed schemes involving oil tankers or nuclear installations. Moreover, a narrow definition of damage may exclude environmental losses which cannot be easily quantified in monetary terms, such as wildlife, or which affect the quality of the environment without causing actual physical damage.[402]

(15) Moreover, it has been asserted that the principle "cannot be treated as a rigid rule of universal application, nor are the means used to implement it going to be the same in all cases".[403] Thus, a "great deal of flexibility will be inevitable, taking full account of differences in the nature of the risk and the economic feasibility of full internalization of environmental costs in industries whose capacity to bear them will vary".[404] Some commentators doubt "whether [the 'polluter pays' principle] has achieved the status of a generally applicable rule of customary international law, except perhaps in relation to states in the [European Community], the UNECE, and the OECD".[405]

(16) The aspect of promptness and adequacy of compensation is related to the question of measurement of compensation. General international law does not specify "principles, criteria or methods for determining *a priori* how reparation is to be made for the injury caused by a wrongful act or omission".[406] Reparation under international law is a consequence of a breach of a primary obligation. The general obligation to make full reparation is restated in article 31 of the draft articles on responsibility of States for internationally wrongful acts.[407] The content of this obligation was detailed by the PCIJ in the *Chorzów Factory* case, when it stated *obiter dicta*:

> The essential principle contained in the actual notion of an illegal act—a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals—is that reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award, if need be, of damages for loss sustained which is not covered by restitution in kind or payment in place of it—such are the principles which should serve to determine the amount of compensation due for an act contrary to international law.[408]

(17) The *Chorzów Factory* standard applies in respect of internationally wrongful acts, which are not covered by the present draft principles. It is useful, however, in appreciating the limits and the parallels that ought to be drawn in respect of activities covered by the present draft principles. There are questions about principles on the basis of which compensation could be awarded: Should compensation be awarded only in respect of the actual loss suffered by the victim to the extent it can be quantified? Or should compensation go beyond that and reflect the paying capacity of the operator? Two guiding principles seem relevant. The first is that damages awarded should not have a punitive function.[409] The second is

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or those that harm or have a risk of causing harm to the environment. Intent need not be proved. Under South Africa's National Environmental Management Act of 1998, strict liability is imposed on operators who may cause, have caused or are causing significant pollution or degradation of environmental harm. Singapore provides strict liability for criminal offences. It imposes obligations of clean-up on polluters without the need for any intentional or negligent behaviour. See also the survey, prepared by the Secretariat, of liability regimes relevant to the topic of international liability for injurious consequences arising out of acts not prohibited by international law (international liability in case of loss from transboundary harm arising out of hazardous activities), *Yearbook ... 2004*, vol. II (Part One), document A/CN.4/543, paras. 272–286.

[402] Birnie and Boyle, *International Law …*, *op. cit.* (footnote 306 above), pp. 93–94.

[403] *Ibid*., pp. 94–95. See also the survey prepared by the Secretariat of liability regimes (footnote 401 above), chapter II.

[404] P. W. Birnie and A. E. Boyle, *International Law ..., op. cit.* (footnote 306 above), p. 95. The authors noted that "reference to 'public interest' in Principle 16 [of the Rio Declaration] leaves ample room for exceptions … . As adopted at Rio, the 'polluter pays' principle is neither absolute nor obligatory" (p. 93). They also noted that in the case of East European nuclear installations, "Western European Governments, who represent one large group of potential victims … have funded the work needed to improve safety standards" (p. 94).

[405] Sands, *op. cit.* (footnote 362 above), p. 280, an illustration of the flexible way in which this principle is applied in the context of OECD and the European Union. Rüdiger Wolfrum, notes that "[a]lthough the International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 and the Convention on the Transboundary Effects of Industrial Accidents both refer in their Preambles to the polluter-pays principle as being a 'general principle of international environmental law', such view is not sustained in light of the United States' practice and also in light of the uncertainties about its scope and consequences" (R. Wolfrum, "International environmental law: purposes, principles and means of ensuring compliance", in F. L. Morrison and R. Wolfrum (eds.), *International, Regional, and National Environmental Law*, The Hague, Kluwer Law International, 2000, p. 19). See generally N. de Sadeleer, *Environmental Principles: from Political Slogans to Legal Rules*, Oxford University Press, 2002, pp. 21–60.

In the arbitration between France and the Netherlands, concerning the application of the 1976 Convention on the protection of the Rhine against pollution by chlorides and the 1991 Additional Protocol to the Convention on the protection of the Rhine against pollution by chlorides, the Arbitral Tribunal was requested to consider the "polluter pays" principle in its interpretation of the Convention, although it was not expressly referred to therein. The Tribunal in its 2004 award concluded that, despite its importance in treaty law, the "polluter pays" principle is not a part of general international law, and was therefore not pertinent to its interpretation of the Convention. The Tribunal, stated, in relevant part: "The Tribunal notes that the Netherlands has referred to the 'polluter pays' principle in support of its claim. … The Tribunal observes that this principle features in several international instruments, bilateral as well as multilateral, and that it operates at various levels of effectiveness. Without denying its importance in treaty law, the Tribunal does not view this principle as being a part of general international law" (*Case concerning the audit of accounts between the Netherlands and France in application of the Protocol of 25 September 1991 Additional to the Convention for the Protection of the Rhine from Pollution by Chlorides of 3 December 1976, Arbitral award of 12 March 2004*, UNRIAA, vol. XXV (Sales No. E/F.05.V.5), p. 312, paras. 102–103). The text of the award is also available at www.pca-cpa.org.

[406] F. V. García-Amador, L. B. Sohn and R. R. Baxter (eds.), *Recent Codification of the Law of State Responsibility for Injury to Aliens* (see footnote 280 above), p. 89. See also A. Boyle, "Reparation for environmental damage in international law: some preliminary problems", in Bowman and Boyle, *Environmental Damage ... op. cit.* (footnote 333 above), pp. 17–26. See also the eleventh report on international liability for injurious consequences arising out of acts not prohibited by international law of the Special Rapporteur Julio Barboza (footnote 285 above).

[407] *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 91–94 (art. 31 and its commentary).

[408] *Chorzów Factory* (see footnote 269 above), at p. 47.

[409] See B. Graefrath, "Responsibility and damages caused: relationship between responsibility and damages", *Recueil des cours: Collected courses of the Hague Academy of International Law, 1984-II*, vol. 185 (1985), pp. 9–150, at pp. 100–102. See also the draft articles on State responsibility for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 98–105 (article 36 and its commentary).

that the victim can only be compensated for the loss suffered but cannot expect to financially gain from the harm caused.[410] While keeping in view these two basic principles, the point can still be made that equity, as well as the "polluter pays" principle, demands that the operator should not be allowed to seek out safe havens to engage in risk-bearing hazardous activities without expecting to pay for damage caused, so as to provide an incentive to exert utmost care and due diligence to prevent damage in the first instance.[411]

(18) Some general principles concerning payment of compensation have evolved over a period of time and were endorsed by the ICJ and other international tribunals. These may be briefly noted:[412] (*a*) financially assessable damage, that is, damage quantifiable in monetary terms, is compensable; (*b*) this includes damage suffered by the State to its property or personnel or in respect of expenditures reasonably incurred to remedy or mitigate damage, as well as damage suffered by natural or legal persons, both nationals and those who are resident and suffered injury on its territory; (*c*) the particular circumstances of the case, the content of the obligation breached, the assessment of reasonableness of measures undertaken by parties in respect of the damage caused, and finally, consideration of equity and mutual accommodation. These factors will determine the terms or heads against which precise sums of compensation would be payable. Accordingly, the following guidelines on the basis of awards rendered by international courts and tribunals may be noted:[413] compensation is payable in respect of personal injury, for directly associated material loss such as loss of earnings and earning capacity, medical expenses including costs for achieving full rehabilitation; compensation is also payable for non-material damage suffered as, for example, for "loss of loved ones, pain and suffering as well as the affront to sensibilities associated with an intrusion on the person, home or private life".[414]

(19) In respect of damage to property, the loss is usually assessed against capital value, loss of profits and incidental expenses. In this context, different valuation techniques and concepts like assessment of "fair market value", "net book value", "liquidation or dissolution value" and "discounted cash flow" factoring elements of risk and probability have been used. On these and other issues associated with quantification of compensation there is ample material, particularly in the context of injury caused to aliens and their property through nationalization of their companies or property.[415]

(20) The principles developed in the context of disputes concerning foreign investment may not automatically be extended to apply to the issues of compensation in the field of transboundary damage. There may be difficult questions regarding claims eligible for compensation, such as economic loss, pain and suffering, permanent disability, loss of amenities or of consortium, and the evaluation of the injury. Similarly, damage to property which could be repaired or replaced could be compensated on the basis of the value of the repair or replacement. It is difficult to compensate damage caused to objects of historical or cultural value, except on the basis of arbitrary evaluation made on a case-by-case basis. Further, the looser and less concrete the link between the incident in question with the property claimed to have been damaged, the less certain the right to receive compensation. The commentary to draft principle 2 reveals the extent to which some of these problems have been overcome.

Principle 4. Prompt and adequate compensation

1. Each State should take all necessary measures to ensure that prompt and adequate compensation is available for victims of transboundary damage caused by hazardous activities located within its territory or otherwise under its jurisdiction or control.

2. These measures should include the imposition of liability on the operator or, where appropriate, other person or entity. Such liability should not require proof of fault. Any conditions, limitations or exceptions to such liability shall be consistent with draft principle 3.

3. These measures should also include the requirement on the operator or, where appropriate, other person or entity, to establish and maintain financial security such as insurance, bonds or other financial guarantees to cover claims of compensation.

4. In appropriate cases, these measures should include the requirement for the establishment of industry-wide funds at the national level.

5. In the event that the measures under the preceding paragraphs are insufficient to provide adequate compensation, the State of origin should also ensure that additional financial resources are made available.

Commentary

(1) This draft principle reflects an important role that is envisaged for the State of origin in fashioning a workable system for compliance with the principle of "prompt and adequate compensation". The reference to "[e]ach State" in the present context is to the State

[410] For the principles stated in the "*Lusitania*" case, UNRIAA, vol. VII, p. 32, and the *Chorzów Factory* case (see footnote 269 above) on the function of compensation, see *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 98–105 (article 36 and its commentary).

[411] The Supreme Court of India in the *M. C. Mehta v. Union of India* (the Oleum gas leak case) stressed the point that the "larger and more prosperous the enterprise, the greater must be the amount of compensation payable by it for the harm caused on account of an accident in the carrying on of the hazardous or inherently dangerous activity by the enterprise" (Law Commission of India, *One Hundred Eighty Sixth Report on Proposal to Constitute Environmental Courts* (see footnote 373 above), p. 31).

[412] See the draft articles on State responsibility for internationally wrongful acts, *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 98–105 (article 36 and its commentary and the cases cited therein).

[413] *Ibid.*

[414] *Ibid*., p. 101 (para. (16) of the commentary to article 36). See also V. S. Mishra, "Emerging right to compensation in Indian environmental law", *Delhi Law Review*, vol. 23 (2001), pp. 58–79.

[415] See R. D. Bishop, J. Crawford and W. M. Reisman, *Foreign Investment Disputes: Cases, Materials and Commentary*, The Hague, Kluwer Law International, 2005, pp. 1331–1372 (on methods for valuing losses). See also C. F. Amerasinghe, "Issues of compensation for the taking of alien property in the light of recent cases and practice", *International and Comparative Law Quarterly*, vol. 41 (1992), pp. 22–65.

of origin. The principle contains four interrelated elements: (*a*) the State should ensure prompt and adequate compensation and for this purpose should put in place an appropriate liability regime; (*b*) any such liability regime may place primary liability on the operator, and should not require the proof of fault; (*c*) any conditions, limitations or exceptions that may be placed on such liability should not defeat the purpose of the principle of prompt and adequate compensation; and (*d*) various forms of securities, insurance and industry-wide funding are the means to provide sufficient financial guarantees for compensation. The five paragraphs of draft principle 4 express these four elements.

(2) It should be recalled that the assumption under the present draft principles is that the State of origin would have performed fully all its obligations concerning prevention of transboundary harm from hazardous activities under international law. Without prejudice to other claims that may be made under international law, the responsibility of the State for damage in the context of present principles is therefore not contemplated.

(3) Thus paragraph 1 focuses on the principle that States should ensure payment of adequate and prompt compensation. The State itself is not necessarily obliged to pay such compensation. The principle, in its present form, responds to and reflects a growing demand and consensus in the international community: as part of arrangements for permitting hazardous activities within its jurisdiction and control, it is widely expected that States would make sure that adequate mechanisms are also available to respond to claims for compensation in case of any damage.

(4) The emphasis in paragraph 1 is on all "necessary measures" and each State is given sufficient flexibility to achieve the objective of ensuring prompt and adequate compensation. This is highlighted without prejudice to any *ex gratia* payments to be made or contingency and relief measures that States or other responsible entities may otherwise consider extending to the victims.

(5) As noted in the commentary concerning the "Purposes" of the present draft principles, the need to develop liability regimes in an international context has been recognized and finds expression, for example, in Principle 22 of the 1972 Stockholm Declaration and Principle 13 of the 1992 Rio Declaration.[416]

(6) The basic principle that a State should ensure payment of prompt and adequate compensation for hazardous activities could be traced back as early as the *Trail Smelter* arbitration,[417] a case in which clear and convincing evidence was available for the serious consequence and injury caused to property within one State by the iron ore smelter in another. Since then, numerous treaties, some important decisions and the extensive national law and practice which have evolved have given considerable weight to claims for compensation in respect of transfrontier pollution and damage. Some commentators regard this as a customary law obligation.[418]

(7) The standard of promptness and adequacy in paragraph 1 is a standard that also finds support in the *Trail Smelter* arbitration.[419] The notion of "promptness" refers to the procedures that would govern access to justice, and that would influence the time and duration for the rendering of decisions on compensation payable in a given case. This is also a necessary criterion to be emphasized in view of the fact that litigation in domestic courts involving claims of compensation could be costly and protracted over several years, as it was in the *Amoco Cadiz* case, which took 13 years.[420] To render access to justice more widespread, efficient and prompt, suggestions have been

[416] See above, footnotes 312 and 301, respectively. See also the Malmö Ministerial Declaration, adopted by the Governing Council of UNEP at its sixth special session, *Official Records of the General Assembly, Fifty-fifth Session, Supplement No. 25* (A/55/25), Annex I, decision SS.VI/1 of 31 May 2000; the Programme for the Development and Periodic Review of Environmental Law for the First Decade of the Twenty-First Century (Montevideo Programme III), adopted by the UNEP Governing Council at its twenty-first special session, UNEP-E-GC21, decision 21/23 of 9 February 2001; and the Plan of Implementation of the World Summit on Sustainable Development, A/CONF.199/20, resolution 2 of 4 September 2002, Annex.

[417] See footnote 226 above.

[418] For a mention of different sources as a basis for arriving at this conclusion, see P.-T. Stoll, "Transboundary pollution", in Morrison and Wolfrum (eds.), *op. cit.* (footnote 405 above), pp. 169–200, at pp. 169–174. Stoll notes:

> "It must be recalled, however, that the prohibition principle is based on sovereign right of states to their territory. There is no evidence that it is necessary to refer to a specific entitlement based on a single component in raising a complaint about transboundary pollution. One can thus conclude that the prohibition of transboundary pollution is based on the state interest in the environmental integrity of its territory. Treaty law reflects this notion. … Sovereignty, while creating a right to the environmental integrity of a territory or area at one hand, at the other hand is the very basis of states' responsibility for the pollution which originates within their territory" (*ibid.*, pp. 174–175)

In addition, it is also suggested that principles of abuse of rights and good neighbourhood have provided a basis for the prohibition against transboundary harm. See J. G. Lammers, "Centre for Studies and Research (1985). The present state of research carried out by the English-speaking Section of the Centre for Studies and Research", *Transfrontier Pollution and International Law*, The Hague, Kluwer Law International, 1986, p. 89–133, at p. 100.

[419] See footnote 226 above. See also Principle 10 of the Rio Declaration (footnote 301 above); article 235, paragraph 2 of the United Nations Convention on the Law of the Sea; article 2, paragraph 1 of the 1996 Helsinki articles on international watercourses (K. W. Cuperus and A. E. Boyle, "Articles on private law remedies for transboundary damage in international watercourses", in International Law Association, *Report of the Sixty-seventh Conference, Helsinki, 12–17 August 1996*, London, 1996, pp. 403 *et seq.*) and human rights law precedents. See also A. E. Boyle, "Globalising environmental liability: the interplay of national and international law", *Journal of Environmental Law*, vol. 17, No. 1 (2005), pp. 3–26, at p. 18.

[420] See footnote 370 above. See also E. Fontaine, "The French experience: '*Tanio*' and '*Amoco Cadiz*' incidents compared", in C. M. de la Rue (ed.), *Liability for Damage to the Marine Environment*, London, Lloyd's of London Press, 1993, pp. 101–108, at p. 105. Similarly, in the case of the Bhopal gas tragedy, it was stated that by the time the case first reached the Supreme Court of India on the issue whether interim relief assessed against Union Carbide on behalf of victims was appropriate, litigation had been underway in India for more than five years without even reaching the commencement of pretrial discovery, see K. F. McCallion and H. R. Sharma, "International resolution of environmental disputes and the Bhopal catastrophe", in The International Bureau of the Permanent Court of Arbitration (ed.), *International Investments and Protection of the Environment*, The Hague, Kluwer Law International, 2001, pp. 239–270, at p. 249. It is also stated that *Trail Smelter* arbitration took about 14 years to adjudicate upon the claims of private parties. See P. McNamara, *The Availability of Civil Remedies to Protect Persons and Property from Transfrontier Pollution Injury*, Frankfurt, Alfred Metzner Verlag, 1981, p. 70.

made to establish special national or international environmental courts.[421]

(8) On the other hand, the notion of "adequacy" of compensation refers to any number of issues.[422] For example, a lump sum amount of compensation agreed upon as a result of negotiations between the operator or the State of origin and the victims or other concerned States following the consolidation of claims of all the victims of harm may be regarded as adequate compensation. So would compensation awarded by a court as a result of the litigation entertained in its jurisdiction, subject to confirmation by superior courts wherever necessary. It is *ipso facto* adequate as long as the due process requirements are met. As long as compensation given is not arbitrary and grossly disproportionate to the damage actually suffered, even if it is less than full, it can be regarded as adequate. In other words, adequacy is not intended to denote "sufficiency".

(9) The phrase "its territory or otherwise under its jurisdiction or control" has the same meaning as the terms used in paragraph 1 (*a*) of article 6 of the draft articles on prevention.[423]

(10) Paragraph 2 spells out the first important measure that may be taken by each State, namely the imposition of liability on the operator or, where appropriate, other person or entity. The draft principles envisage the definition of "operator" in functional terms, based on the factual determination as to who has the use, control and direction of the object at the relevant time. It is worth stressing that liability in case of significant damage is generally channelled[424] to the operator of the installation. There are, however, other possibilities that exist. In the case of ships, it is channelled to the owner, not the operator. This means that charterers—who may be the actual operators—are not liable under the 1992 Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage. In other cases, liability is channelled through more than one entity. Under the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal, waste generators, exporters, importers and disposers are all potentially liable at different stages in the transit of waste. The real underlying principle is not that "operators" are always liable, but that the party with the most effective control of the risk at the time of the accident or with the ability to provide compensation is made primarily liable.

(11) Operator's liability has gained ground for several reasons and principally on the belief that one who created high risks seeking economic benefit must bear the burden of any adverse consequences of controlling the activity.[425] The imposition of the primary liability on the operator is widely accepted in international treaty regimes and in national law and practice.[426]

(12) The second sentence of paragraph 2 provides that such liability should not require proof of fault. Various designations are used to describe contemporary doctrine imposing strict liability, among them: "liability without fault" (*responsabilité sans faute*); "negligence without fault" (*négligence sans faute*), "presumed responsibility" (*responsabilité présumée*), "fault *per se*" (*négligence objective*), "objective liability" (*responsabilité objective*) or "risk liability" (*responsabilité pour risque créé*).[427] The phrase "[s]uch liability should not require proof of fault" seeks to capture this broad spectrum of designations.

(13) Hazardous and ultrahazardous activities, the subject of the present draft principles, involve complex operations and carry with them certain inherent risks of causing significant harm. In such matters, it is widely recognized that it would be unjust and inappropriate to make the claimant shoulder a heavy burden of proof of fault or negligence in respect of highly complex technological activities whose risks and operation the concerned industry closely guards as secret. Strict liability is recognized in many jurisdictions when assigning liability for inherently dangerous or hazardous activities.[428] The case for strict liability for ultrahazardous or abnormally dangerous activities was held to be the most appropriate technique, both under common and civil law, to enable victims of dangerous and ultrahazardous activities to recover compensation without having to establish proof of fault on the basis of what is often detailed

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[421] See A. Rest, "Need for an international court for the environment? Underdeveloped legal protection for the individual in transnational litigation", *Environmental Policy and Law*, vol. 24, No. 4 (June 1994), pp. 173–187. For the view that the establishment of an international environmental court may not be a proper answer to the "need to enhance the rule of law through access to justice and the representation of community interests", see E. Hey, "Reflections on an international environmental court", in The International Bureau of the Permanent Court of Arbitration (ed.), *International Investments ... op. cit.* (footnote 420 above), pp. 271–301, at p. 299–300. At the national level, the Law Commission of India made a very persuasive case for the establishment of national environmental courts in India (see Law Commission of India, *One Hundred Eighty Sixth Report on Proposal to Constitute Environmental Courts* (footnote 373 above)). Australia and New Zealand already have environmental courts. Available at: http://lawcommissionofindia.nic.in/reports.htm.

[422] For an exhaustive enumeration of the implementation of the principle of prompt, adequate and effective compensation in practice, see Lefeber, *op. cit.* (footnote 330 above), pp. 229–312.

[423] *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 156. See also draft article 1 and the commentary thereto, especially paragraphs (7)–(12) (*ibid.*, pp. 149–151).

[424] According to Goldie, the nuclear liability conventions initiated the new trend of channelling liability back to the operator "no matter how long the chain of causation, nor how novel the intervening factors (other than a very limited number of exculpatory ones)" (L. F. E. Goldie, "Concepts of strict and absolute liability and the ranking of liability in terms of relative exposure to risk", *Netherlands Yearbook of International Law*, vol. 16 (see footnote 319 above), p. 196). On this point see also L. F. E. Goldie, "Liability for damage and the progressive development of international law", *The International and Comparative Law Quarterly*, vol. 14 (1965), pp. 1189 *et seq.*, at pp. 1215–1218.

[425] For an interesting account of economic, political and strategic factors influencing the choices made in channelling liability, see G. Doeker and T. Gehring, "Private or international liability for transnational environmental damage—the precedent of conventional liability regimes", *Journal of Environmental Law*, vol. 2, No. 1 (1990), pp. 1–16, at p. 7.

[426] See the survey prepared by the Secretariat of liability regimes (footnote 401 above), paras. 340–386.

[427] See F. F. Stone, "Liability for damage caused by things", in A. Tunc (ed.), *International Encyclopedia of Comparative Law*, vol. XI (Torts), part I, The Hague, Martinus Nijhoff, 1983, chapter 5, p. 3, paragraph 1.

[428] See the survey prepared by the Secretariat of liability regimes (footnote 401 above), paras. 29–260. The Supreme Court of India, in *M. C. Mehta v. Union of India* (see footnote 411 above), held that in the case of hazardous activities, exceptions which could be pleaded to avoid absolute or strict liability, like that the damage is not foreseeable, and that the use involved is a natural one, are not available.

technical evidence,[429] which, in turn, would require on the part of victims a complete understanding of the complicated and complex operation or activity. The case for strict liability is strengthened when the risk has been introduced unilaterally by the defendant.[430]

(14) In the case of damage arising from hazardous activities, it is fair to designate strict liability of the operator at the international level.[431] Strict liability has been adopted as the basis of liability in several instruments, and among the recently negotiated instruments it is provided for in article 4 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, article 4 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal and article 8 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment.

(15) In the case of activities which are not dangerous but still carry the risk of causing significant harm, there perhaps is a better case for liability to be linked to fault or negligence. In addition, since profits associated with the risky activity provide a motivation for industry in undertaking such activity, strict liability regimes are generally assumed to provide incentives for better management of the risk involved. However, this is an assumption which may not always hold up. As these activities have been accepted only because of their social utility and indispensability for economic growth, States may consider at the opportune time reviewing their indispensability by exploring more environmentally sound alternatives which are also less hazardous.

(16) Strict liability may alleviate the burden that victims may otherwise have in proving fault of the operator, but it does not eliminate the difficulties involved in establishing the necessary causal connection of the damage to the source of the activity. The principle of causation is linked to questions of foreseeability and proximity or direct loss. Courts in different jurisdictions have applied the principles and notions of proximate cause, adequate causation, foreseeability and remoteness of the damage. This is a highly discretionary and unpredictable branch of law. Different jurisdictions have applied these concepts with different results. It may be mentioned that the test of proximity seems to have been gradually eased in modern tort law. Developments have moved from strict *condicio sine qua non* theory over the foreseeability ("adequacy") test to a less stringent causation test requiring only the "reasonable imputation" of damage. Further, the foreseeability test could become less and less important with the progress being made in the fields of medicine, biology, biochemistry, statistics and other relevant fields. Given these reasons, such tests have not been included in a more general analytical model on loss allocation.[432]

(17) The point worth bearing in mind is that in transforming the concept of strict liability from a domestic, national context—where it is well-established but with all the differences associated with its invocation and application in different jurisdictions—into an international standard, its elements should be carefully defined, while keeping its basic objective in view, that is, to make the person liable without any proof of fault for having created a risk by engaging in a dangerous or hazardous activity. Such a definition is necessary not only to capture the most positive elements of the concept of strict liability as they are obtained in different jurisdictions, making the international standard widely acceptable, but would also ensure the standard adopted truly serves the cause of the victims exposed to dangerous activities, thus facilitating prompt and effective remedies.

(18) This task can be approached in different ways.[433] For example, it could be done by adopting a proper definition of damage as has been done in the case of the "Use of terms", which defines "damage" as damage to person, property and the environment. It could also be done by designating strict liability as the standard for invoking liability, while also specifying that it is meant to include all damage foreseeable in its most generalized form and that knowledge of the extent of the potential danger is not a prerequisite of liability. Further, it may be clarified as part of the application of the rule that it is sufficient if the use posed a risk of harm to the others and, accordingly, that it is not open to the operator to plead exemption from liability on the ground that the use involved is a natural one.

(19) The third sentence of paragraph 2 recognizes that it is part of the practice for States borne out in domestic and treaty practice to subject liability to certain conditions, limitations or exceptions. However, it must be ensured that such conditions, limitations or exceptions do not fundamentally alter the purpose of providing for prompt and adequate compensation. The point has thus been emphasized that any such conditions, limitations or exceptions shall be consistent with the purposes of the present draft principles.

(20) It is common to associate the concept of strict liability with the concept of limited liability. Limited liability has several policy objectives. It is justified as a matter of convenience to encourage the operator to continue to be engaged in such a hazardous but socially and economically beneficial activity. Strict liability is also aimed at securing reasonable insurance coverage for the activity.

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[429] See Reid, *loc. cit.* (footnote 378 above), p. 756. See also the survey prepared by the Secretariat of liability regimes (footnote 401 above), para. 23.

[430] See the survey prepared by the Secretariat of liability regimes, *ibid*.

[431] The Commission's Working Group on international liability for injurious consequences arising out of activities not prohibited by international law exhibited hesitation in 1996 in designating damage arising from all activities covered within the scope of the draft principles subject to the regime of strict liability. It may be recalled that the Commission noted that the concepts of strict and absolute liability which "are familiar in the domestic law in many States and in relation to certain [that is, ultrahazardous] activities in international law … have not been fully developed in international law, in respect to a large group of activities such as those covered by article 1" (*Yearbook ... 1996*, vol. II (Part Two), Annex I, p. 128 (para. (1) of the general commentary to chapter III). In arriving at this conclusion, the Working Group had the benefit of the survey prepared by the Secretariat of liability regimes relevant to the topic of international liability for injurious consequences arising out of acts not prohibited by international law (see footnote 284 above).

[432] See Wetterstein, "A proprietary or possessory interest …", *loc. cit.* (footnote 323 above), at p. 40.

[433] See the observations of Reid, *loc. cit.* (footnote 378 above), pp. 741–743.

Further, if liability has to be strict, that is, if liability has to be established without a strict burden of proof for the claimants, limited liability may be regarded as a reasonable *quid pro quo*. Although none of the propositions are self-evident truths, they are widely regarded as relevant.[434]

(21) It is arguable that a scheme of limited liability is unsatisfactory, as it is not capable of providing sufficient incentive to the operator to take stricter measures of prevention. If the limits are set too low, it could even become a licence to pollute or cause injury to others and externalize the real costs of the operator. Secondly, it may not be able to meet all the legitimate demands and claims of innocent victims for reparation in case of injury. For this reason, it is important to set limits of financial liability at a sufficiently high level, keeping in view the magnitude of the risk of the activity and the reasonable possibility for insurance to cover a significant portion of the risk involved.

(22) Article 9 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters and article 12 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal provide for strict but limited liability. In contrast, article 6, paragraph 1 and article 7, paragraph 1 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment provide for strict liability without any provision for limiting liability. Where limits are imposed on the financial liability of operator, generally such limits do not affect any interest or costs awarded by the competent court. Moreover, limits of liability are subject to review on a regular basis.

(23) Financial limits are well known in the case of regimes governing oil pollution at sea and nuclear incidents. For example, under the 1992 Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage, the shipowner's maximum limit of liability is 59.7 million Special Drawing Rights (SDRs) (art. 6); thereafter the IOPC is liable to compensate for further damage up to a total of 135 million SDRs (including the amounts received from the owner), or in the case of damage resulting from natural phenomena, 200 million SDRs.[435] Similarly, the Protocol to amend the Vienna Convention on civil liability for nuclear damage also prescribed appropriate limits for an operator's liability.[436]

(24) Most liability regimes exclude limited liability in case of fault. The operator is made liable for the damage caused or contributed to by his or her wrongful intentional, reckless or negligent acts or omissions. Specific provisions to this extent are available for example in article 5 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal and article 5 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters. In the case of operations involving highly complicated chemical or industrial processes or technology, fault liability could pose a serious burden of proof for the victims. Their rights could nevertheless be better safeguarded in several ways. For example, the burden of proof could be reversed, requiring the operator to prove that no negligence or intentional wrongful conduct was involved. Liberal inferences may be drawn from the inherently dangerous activity. Statutory obligations could be imposed upon the operator to give access to the victims or the public to the information concerning the operations.

(25) One advantage of a strict but limited liability from the perspective of the victim is that the person concerned need not prove negligence and would also know precisely whom to sue. In cases where harm is caused by more than one activity and could not reasonably be traced to any one of them or cannot be separated with a sufficient degree of certainty, jurisdictions have tended to make provision for joint and several liability.[437] Existing international instruments also provide for that kind of liability.[438]

(26) If, however, the person who has suffered damage has by his or her own fault caused the damage or

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[434] See R. R. Churchill, "Facilitating (transnational) civil liability litigation for environmental damage by means of treaties: progress, problems, and prospects", *Yearbook of International Environmental Law*, vol. 12 (2001), pp. 3–41, at pp. 35–37.

[435] See article V, paragraph 1 of the 1969 International Convention on Civil Liability for Oil Pollution Damage as amended by the 1992 Protocol, article 4 of the International Convention on the establishment of an international fund for compensation for oil pollution damage, and article 6 of the Protocol of 1992 to amend the International Convention on the establishment of an international fund for compensation for oil pollution damage. Following the sinking of the *Erika* off the French coast in December 1999, the maximum limit was raised to 89.77 million SDRs, effective 1 November 2003. Under the 2000 amendments to the Protocol of 1992 to amend the International Convention on the establishment of an international fund for compensation for oil pollution damage, that would enter into force in November 2003, the amounts were raised from 135 million SDRs to 203 million SDRs. If three States contributing to the Fund receive more than 600 million tons of oil per annum, the maximum amount is raised to 300,740,000 SDRs, from 200 million SDRs. See also Sands, *op. cit.* (footnote 362 above), pp. 915–917.

[436] The installation State is required to assure that the operator is liable for any one incident for not less than 300 million SDRs or for a transition period of 10 years, a transitional amount of 150 million SDRs is to be assured, in addition by the installation State itself. The Convention on Supplementary Compensation for Nuclear Damage provides an additional sum, which may exceed $1 billion (see articles III and IV).

[437] On joint and several liability, see Bergkamp, *op. cit.* (footnote 347 above), pp. 298–306.

[438] For examples of treaty practice, see for example article IV of the International Convention on Civil Liability for Oil Pollution Damage; article 4 of the 1992 Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage; article 8 of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention); article 5 of the International Convention on Civil Liability for Bunker Oil Pollution Damage; article 4 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal; article 4 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters; and article 11 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment. See also article VII of the Convention on the Liability of Operators of Nuclear Ships; article 2 of the Protocol to amend the Vienna Convention on civil liability for nuclear damage; article II of the Vienna Convention on civil liability for nuclear damage; article 3 of the Convention on third party liability in the field of nuclear energy; and article 3 of the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982.

contributed to it, compensation may be denied or reduced having regard to all the circumstances.

(27) It is also usual for liability regimes and domestic law providing for strict liability to specify a limited set of fairly uniform exceptions to the liability of the operator. A typical illustration of the exceptions to liability can be found in articles 8 and 9 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, article 3 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal or article 4 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters. Liability is excepted if, despite taking all appropriate measures, the damage was (*a*) the result of an act of armed conflict, hostilities, civil war or insurrection; (*b*) the result of a natural phenomenon of exceptional, inevitable, unforeseeable and irresistible character; (*c*) wholly the result of compliance with a compulsory measure of a public authority in the State of injury; or (*d*) wholly the result of the wrongful intentional conduct of a third party.[439]

(28) Paragraph 3 provides that the "measures" envisaged under paragraph 1 should include imposition of a requirement on the operator or, where appropriate, other person or entity, to establish and maintain financial security such as insurance, bonds or other financial guarantees to cover claims of compensation. The objective here is to ensure that the operator has sufficient funds at his disposal to enable him to meet claims of compensation, in the event of an accident or incident. It is understood that availability of insurance and other financial securities for hazardous operations depends upon many factors and mostly on the ability of the operator to identify the "risk" involved as precisely as possible. The assessment of "risk" for this purpose should not only consider the risk inherent in the activity to cause damage but also the statistical probability of the type and number of claims to which such damage might give rise as well as the number of claimants that may be involved.

(29) In the case of activities with a risk of causing significant transboundary harm, the insurance coverage would have to provide for the "foreign loss event" in addition to the "domestic loss event". The modern dynamics of law governing causation multiplies the factors that the operator in the first instance—and the insurers ultimately—would have to take into account while assessing the "risk" that needed to be covered. In this connection, the liberal tests that are invoked to establish a causal link, widening the reach of the tests of "proximate cause" and "foreseeability" and even replacing the same with a broader "general capability" test, are at issue.[440]

(30) Despite these difficulties, it is encouraging that insurance coverage is increasingly being made available for damage to persons, property or the environment due to oil spills and other hazardous activities.[441] This is mainly because of the growing recognition on the part of the industry, consumers and Governments that the products and services that the hazardous industry is able to provide are worthy of protection in the public interest. In order to maintain these products and services, the losses that such activities generate must be widely allocated and shared. Insurance and financial institutions are indispensable actors in any such scheme of allocation. These are institutions with expertise to manage risk and their profitability lies in pooling financial resources and wisely investing in risk-bearing activities.[442] However, it is inevitable that premiums for insurance coverage of the hazardous activities will grow in direct proportion to the range and magnitude of the risk that is sought to be covered. The increase in the premium costs is also directly related to the growing trend to designate an operator's liability as strict. Further, the trend to raise the limits of liability to

[439] Under paragraphs 2 and 3 of article III of the International Convention on Civil Liability for Oil Pollution Damage as amended by the 1992 Protocol, *war, hostilities, civil war, insurrection or natural phenomena of an exceptional, inevitable and irresistible character* are elements providing exoneration from liability for the owner, independently of negligence on the part of the claimant. See also article III of the International Convention on Civil Liability for Oil Pollution Damage; article 3 of the International Convention on Civil Liability for Bunker Oil Pollution Damage; and article 7 of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention). Article 3 of the International Convention on Civil Liability for Oil Pollution Damage resulting from the Exploration for and Exploitation of Seabed Mineral Resources provides similar language in respect of the *operator of an installation*. See also article 3 of the Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD).

Exemptions are also referred to in article 6 of the Protocol to amend the Vienna Convention on civil liability for nuclear damage: under this Convention, no liability shall attach to an operator if he proves that the nuclear damage is directly due to an act of armed conflict, civil war or insurrection. See also article IV, paragraph 3 of the Vienna Convention on civil liability for nuclear damage; article 9 of Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982; article 3, paragraph 5 of the annex to the Convention on Supplementary Compensation for Nuclear Damage; and article 4, paragraph 1 of Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (footnote 316 above). The Directive also does not apply to activities whose main purpose is to serve national defence or international security. In accordance with article 4, paragraph 6, it also does not apply to activities whose sole purpose is to protect from natural disasters. Terrorist acts are included in the most recent liability instrument: article 8, paragraph 1 of Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty on Liability Arising From Environmental Emergencies provides that "[a]n operator shall not be liable pursuant to Article 6 if it proves that the environmental emergency was caused by: (*a*) an act or omission necessary to protect human life or safety; (*b*) an event constituting in the circumstances of Antarctica a natural disaster of an exceptional character, which could not have been reasonably foreseen, either generally or in the particular case, provided all reasonable preventative measures have been taken that are designed to reduce the risk of environmental emergencies and their potential adverse impact; (*c*) an act of terrorism; or (*d*) an act of belligerency against the activities of the operator". For examples of domestic law, see the survey prepared by the Secretariat of liability regimes (footnote 401 above), paras. 434–476.

[440] H.-D. Sellschopp, "Multiple tort feasors/combined polluter theories, causality and assumption of proof/statistical proof, technical insurance aspects" in Kröner (ed.), *op. cit.* (footnote 356 above), pp. 51–57, at pp. 52–53.

[441] See Ch. S. Donovan and E. M. Miller, "Limited insurability of unlimited liability: serial claims, aggregates and alternatives: the American view", in Kröner (ed.), *op. cit.* (footnote 356 above), pp. 129–158; and W. Pfennigstorf, "Limited insurability of unlimited liability: serial claims, aggregates and alternatives: the Continental view", *ibid*., pp. 159–165.

[442] See A. J. E. Fitzsimmons, "Non-marine environmental liability: the use of insurance pools and the European dimension", *ibid*., pp. 166–173, at pp. 166–167.

higher and higher levels, even if the operator's liability is capped, is also a factor in the rising costs of premiums.

(31) The State concerned may establish minimum limits for financial securities for such purposes, taking into consideration the availability of capital resources through banks or other financial agencies. Even insurance schemes may require a certain minimum financial solvency from the operator to extend their coverage. Under most of the liability schemes, the operator is obliged to obtain insurance and such other suitable financial securities.[443] This may be particularly necessary to take advantage of the limited financial liability scheme, where it is available. However, in view of the diversity of legal systems and differences in economic conditions, some flexibility for States in requiring and arranging suitable financial and security guarantees may be envisaged.[444] An effective insurance system may also require wide participation by potentially interested States.[445]

(32) The importance of such mechanisms cannot be overemphasized. It has been noted that "financial assurance is beneficial for all stakeholders: for public authorities and the public in general, it is one of the most effective, if not the only, way of ensuring that restoration actually takes place in line with the polluter-pays principle; for industry operators, it provides a way of spreading risks and managing uncertainties; for the insurance industry, it is a sizeable market".[446] Such insurance coverage should also be available for clean-up costs.[447]

(33) Insurance coverage is available in some jurisdictions, such as Europe and the United States. The experience gained in such markets can be quickly transferred to other markets as the insurance industry is increasingly global. Article 14 of Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage,[448] for example, provides that member States shall take measures to encourage the development of security instruments and markets by the appropriate security, economic and financial operators, including financial mechanisms in case of insolvency, with the aim of enabling operators to use financial guarantees to cover their responsibilities under the Directive.

(34) One of the consequences of ensuring the availability of insurance and financial security is that a claim for compensation may be allowed as one option under domestic law directly against any person providing financial security coverage. However, such a person may be given the right to require the operator to be joined in the proceedings. Such a person is also entitled to invoke the defences to which the operator would otherwise be entitled under the law. Article 11, paragraph 3 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters and article 14, paragraph 4 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal provide for such possibilities. However, both Protocols allow States to make a declaration, if they wish, not allowing for such direct action.

(35) Paragraphs 4 and 5 refer to the other equally important measures that the State should focus upon. This is about establishing supplementary funds at the national level. Of course, this does not preclude the assumption of these responsibilities at a subordinate level of government in the case of a State with a federal system. Available schemes of allocation of loss envisage some sort of supplementary funding to meet claims of compensation in case the funds at the disposal of the operator are not adequate to compensate victims. Most liability regimes concerning dangerous activities provide for additional funding sources to meet the claims of damage, and particularly to meet the costs of response and restoration measures that are essential to contain the damage and restore value to affected natural resources and public amenities.

(36) Additional sources of funding could be created out of different accounts. One account could be out of public funds, as part of the national budget. In other words, the State could share in the allocation of loss created by the damage, as has happened in the case of the nuclear energy operations. Another account could be a common pool of funds created by contributions either from operators of the same category of dangerous activities or from entities for whose direct benefit the dangerous or hazardous activity is carried out. This is the case with management of risks associated with transport of oil by sea. However, in the case of hazardous activities which are very special, supplementary funds may have to be developed through some form of taxation on consumers of the products and services the industry generates and supports. This may be particularly necessary if the pool of operators and directly interested consumers is very small and not connected by any common economic or strategic interest.

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[443] For treaty practice, see, for example, article III of the Convention on the Liability of Operators of Nuclear Ships; article 7 of the Protocol to amend the Vienna Convention on civil liability for nuclear damage; article VII of the Vienna Convention on civil liability for nuclear damage; article 10 of the Convention on third party liability in the field of nuclear energy; and article 10 of the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982. See also article V of the International Convention on Civil Liability for Oil Pollution Damage as amended by the 1992 Protocol; article 12 of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention); article 7 of the International Convention on Civil Liability for Bunker Oil Pollution Damage; article 14 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal; article 11 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters; and article 12 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment.

[444] See, for example, the statement by China, *Official Records of the General Assembly, Fifty-eighth Session, Sixth Committee, 19th meeting* (A/C.6/58/SR.19), para. 43.

[445] See, for example, the statement by Italy, *ibid., 17th meeting* (A/C.6/58/SR.17), para. 28.

[446] Proposal for a directive of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage, of 23 January 2002 (COM (2002) 17 final).

[447] *Ibid.*

[448] See footnote 316 above.

(37) Paragraph 4 deals with industry funding and provides that in appropriate cases, these measures should include the requirement for the establishment of industry funds at the national level. The words "these measures" reflects the fact that the State has the option of achieving the objective of setting up of industry-wide funding in a variety of ways, depending upon the particular circumstances.

(38) Paragraph 5 provides that in the event the measures mentioned in the preceding paragraphs are insufficient to provide adequate compensation, the State of origin should also ensure that additional financial resources are made available. While it does not directly require the State of origin to set up government funds to guarantee prompt and adequate compensation, it provides that the State of origin should ensure that sufficient financial resources are available in case of damage arising from a hazardous operation situated within its territory or in areas under its jurisdiction.

(39) Paragraphs 3, 4 and 5 are framed as guidelines to encourage States to adopt best practices. The freedom of States to choose one option or the other in accordance with its particular circumstances and conditions is the central theme of the present draft principle. This will, however, require vigilance on the part of the State of origin to continuously review its domestic law to ensure that its regulations are kept up to date with the development of technology and industry practices at home and elsewhere.

Principle 5. Response measures

Upon the occurrence of an incident involving a hazardous activity which results or is likely to result in transboundary damage:

(*a*) the State of origin shall promptly notify all States affected or likely to be affected of the incident and the possible effects of the transboundary damage;

(*b*) the State of origin, with the appropriate involvement of the operator, shall ensure that appropriate response measures are taken and should, for this purpose, rely upon the best available scientific data and technology;

(*c*) the State of origin, as appropriate, should also consult with and seek the cooperation of all States affected or likely to be affected to mitigate the effects of transboundary damage and if possible eliminate them;

(*d*) the States affected or likely to be affected by the transboundary damage shall take all feasible measures to mitigate and if possible to eliminate the effects of such damage;

(*e*) the States concerned should, where appropriate, seek the assistance of competent international organizations and other States on mutually acceptable terms and conditions.

Commentary

(1) Draft principle 5 deals with the situation arising after the occurrence of transboundary damage from both legal and practical perspectives. As soon as an incident involving a hazardous activity results or is likely to result in transboundary damage, with or without simultaneous damage within the territory of the State of origin, the State of origin is called upon to do several things. First, it is expected to obtain from the operator the full facts available about the incident, and most importantly about the dangers the damage poses to the population, their property and the environment in the immediate vicinity. Second, it is expected to ensure that appropriate measures are taken within the means and contingency preparedness at its disposal to mitigate the effects of damage and if possible to eliminate them. Such response measures should include not only clean-up and restoration measures within the jurisdiction of the State of origin but also extend to contain the geographical range of the damage to prevent it from becoming transboundary damage, if it has already not become so. Third, the State of origin is duty-bound to inform all States affected or likely to be affected. The notification must contain all necessary information about the nature of the damage, its likely effects on persons, property and the environment, and the possible precautions that need to be taken to protect them from its ill-effects or to contain, mitigate or eliminate the damage altogether.

(2) Paragraph (*a*), which deals with prompt notification, is an obligation of due diligence imposed upon the State of origin.[449] The notification obligation has to be performed as soon as is practicable. It shall contain all relevant information that is available to the State of origin. In some instances it may not be immediately possible for the State of origin to ascertain the full set of relevant facts and to gather information about the nature of damage and remedial action that can and should be taken.

(3) Paragraph (*b*) requires the State to take appropriate response measures and provides that it should rely upon the best available means and technology. The State of origin is expected to perform due diligence both at the stage of authorization of hazardous activities[450] and in

[449] See Ph. N. Okowa, "Procedural obligations in international environmental agreements", BYBIL, *1996*, vol. 67 (1997), pp. 275–336, at p. 330, where it is observed that the existence in general international law of the duty to warn States at risk in emergency situations has received the "endorsement of the International Court in the *Corfu Channel* case and in the *Nicaragua case*". It is a duty that is the subject of the 1986 Convention on early notification of a nuclear accident, which "confirms an established position at customary law" (*ibid.*, at p. 332).

[450] Closely associated with the duty of prior authorization is the duty to conduct an environmental impact statement (EIA). See Xue, *op. cit.* (footnote 323 above), at p. 166. Phoebe Okowa notes at least five types of ancillary duties associated with the obligation to conduct an EIA. One of them is that the nature of the activity as well as its likely consequences must be clearly articulated and communicated to the States likely to be affected. However, she notes that with the exception of a few conventions, it is widely provided that the State proposing the activity is the sole determinant of the likelihood or seriousness of adverse impact. None of the treaties under consideration permit third States to propose additional or different assessments if they are dissatisfied with those put forward by the State of origin. See Okowa, *loc. cit.* (footnote 449 above), at pp. 282–285, and on the content of an EIA, *ibid.*, at p. 282, footnote 25, and p. 286.

monitoring the activities in progress after authorization and extending into the phase when damage might actually materialize, in spite of best efforts to prevent it. In the *Gabčíkovo–Nagymaros Project* case, the ICJ noted the need for continuous monitoring of hazardous activities as a result of the "awareness of the vulnerability of the environment and the recognition that environmental risks have to be assessed on a continuous basis".[451]

(4) Further, the State concerned should be ever-vigilant and ready to prevent the damage as far as possible, and when damage does occur, ready to mitigate the effects of damage with the best available technology.[452] The role of the State envisaged under the present draft principle is thus complementary to the role assigned to it under articles 16 and 17 of the draft articles on prevention, which deal with requirements of "emergency preparedness" and "notification of emergency".[453]

(5) The present draft principle should be distinguished, however, and goes beyond the provisions of articles 16 and 17 of the draft articles on prevention. States should develop, by way of response measures, necessary contingency preparedness, and employ the best means at their disposal once the emergency arises, consistent with the contemporary knowledge of risks and technical, technological and financial means available to manage them. The present draft principle deals with the need to take necessary response action within the State of origin after the occurrence of an incident resulting in damage, but if possible before it acquires the character of transboundary damage. In this process, the States concerned should seek if necessary assistance from competent international organizations and other States as provided in subparagraph (*e*).

(6) The requirement in paragraph (*b*) is directly connected to the application of the precautionary approach.[454] As with the application of the precautionary approach in any particular field, this allows some flexibility and is expected to be performed keeping in view all social and economic costs and benefits.[455] Indeed, the principle that States should ensure that activities within their jurisdiction and control do not give rise to transboundary harm cannot be overemphasized. By the same token, the importance of response action once an accident or incident has occurred and triggers significant damage cannot be overstated. In fact, such measures are necessary to contain the damage from spreading, and should be taken immediately. This is done in most cases without wasting any time identifying the responsible person or the cause or fault that triggered the event. Paragraph (*b*) assigns to the State of origin the responsibility of determining how such measures should be taken and by whom, which includes the appropriate involvement of the operator. The State would have the option of securing a reimbursement of costs of reasonable response measures.

(7) It is common for the authorities of the State to take action immediately and evacuate affected people to places of safety and provide immediate emergency medical and other relief. It is for this reason that the principle recognizes the important role that the State plays and should play in taking necessary measures as soon as the emergency arises, given its role in securing public welfare and protecting the public interest at all times.

(8) Any measure that the State takes in responding to the emergency created by the hazardous activity does not and should not, however, relegate the operator to a secondary or residuary role. The operator has a primary responsibility for maintaining emergency preparedness and operationalizing any such measures as soon as an incident occurs. The operator can and should give the State all the assistance it needs to discharge its responsibilities. Particularly, the operator is in the best position to indicate the details of the accident, its nature, the time of its occurrence and its exact location and the possible measures that parties likely to be affected could take to minimize the consequences of the damage.[456] Accordingly, the possibility of an operator, including a transnational corporation, being first to react is not intended to be precluded. In case the operator is unable to take the necessary response action, the State of origin shall make arrangements to take such action.[457] In this process it can seek necessary and available help from other States or competent international organizations.

(9) Paragraph (*c*) provides that the State of origin, in its own interest and even as a matter of duty born out of "elementary considerations of humanity",[458] should consult

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[451] *Gabčíkovo–Nagymaros Project* (see footnote 363 above), para. 112.

[452] *Ibid*., at para. 140. The Court stated that it "is mindful that, in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage".

[453] For the text and commentaries of articles 16 and 17 of the draft articles on prevention, see *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 168–169. For the view that the treaty obligations to maintain contingency plans and respond to pollution emergencies must be seen as part of State's duty of due diligence in controlling sources of known environmental harm, see Birnie and Boyle, *International Law …*, *op. cit.* (footnote 306 above), p. 137. The authors also note that "it is legitimate to view the *Corfu Channel* case as authority for a customary obligation to give warning of known environmental hazards" (p. 136).

[454] On the requirement of best available technology, Rüdiger Wolfrum noted that it is closely associated with the precautionary principle. See R. Wolfrum, *loc. cit.* (footnote 405 above), at p. 15. It is also suggested that "[t]he term 'available' suggests that states are responsible for applying only those technological advances that have already been marketed, as opposed to every new development in pollution control" (Stoll, *loc. cit.* (footnote 418 above), p. 182).

[455] See "Guidelines for Applying the Precautionary Principle—Biodiversity Conservation and NRM Management" (joint initiative of Fauna and Flora International and the World Conservation Union (IUCN)), *Environmental Policy and Law*, vol. 35/6 (2005), pp. 274–275, at p. 275.

[456] States are required to notify such details in case of nuclear incidents. See article 2 of the Convention on early notification of a nuclear accident. They must also give, through the IAEA, the States likely to be affected other necessary information to minimize the radiological consequences. See Sands, *op. cit.* (footnote 362 above), at pp. 845–846.

[457] Under articles 5 and 6 of the Directive 2004/35/CE of the European Parliament and of the Council, competent authorities, to be designated under article 11, may require the operator to take necessary preventive or restoration measures or take such measures themselves, if the operator does not take them or cannot be found (see footnote 316 above).

[458] See *Corfu Channel* (footnote 197 above), p. 22. For reference to the particular concept as part of "obligations … based … on certain general and well-recognized principles" (*ibid.*), as distinguished from the traditional sources of international law enumerated in Article 38 of the Statute of the International Court of Justice, see B. Simma, "From bilateralism to community interest in international law", *Recueil des cours: Collected courses of the Hague Academy of International Law 1994-VI*, vol. 250 (1997), pp. 220 *et seq.*, at pp. 291–292.

the States affected or likely to be affected to determine the best possible response action to prevent or mitigate transboundary damage.[459] Consultations are usually triggered upon request. It is considered that the qualification "as appropriate" is sufficiently flexible to accommodate necessary consultation among concerned States and to engage them in all possible modes of cooperation, depending upon the circumstances of each case. The readiness of States to cooperate may not be uniform; it depends on their location and the degree to which they feel obligated to cooperate, as well as their preparedness and capacity.

(10) Paragraph (*d*), on the other hand, requires States affected or likely to be affected to extend to the State of origin their full cooperation. Once notified, the States affected also are under a duty to take all appropriate and reasonable measures to mitigate the damage to which they are exposed.[460] These States should take such response measures as are within their power in areas under their jurisdiction or control to help prevent or mitigate such transboundary damage. They may also seek such assistance as is available from the competent international organizations and other States as envisaged in paragraph (*e*). Such response action is essential not only in the public interest but also to enable the appropriate authorities and courts to treat the subsequent claims for compensation and reimbursement of costs incurred for response measures taken as reasonable.[461]

(11) Paragraph (*e*) is self-explanatory and is modelled on article 28 of the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses (hereinafter the "1997 Watercourses Convention"). It is expected that arrangements for assistance between States or competent international organizations and the States concerned would be on the basis of mutually agreed terms and conditions. Such arrangements may be conditioned by the priorities of assistance of the receiving State, the constitutional provisions and mandates of the competent international organizations, and financial and other arrangements concerning local hospitality or immunities and privileges. Any such arrangements should not be based on purely commercial terms and should be consistent with the elementary considerations of humanity and the importance of rendering humanitarian assistance to victims in distress.

Principle 6. International and domestic remedies

1. States shall provide their domestic judicial and administrative bodies with the necessary jurisdiction and competence and ensure that these bodies have prompt, adequate and effective remedies available in the event of transboundary damage caused by hazardous activities located within their territory or otherwise under their jurisdiction or control.

2. Victims of transboundary damage should have access to remedies in the State of origin that are no less prompt, adequate and effective than those available to victims that suffer damage, from the same incident, within the territory of that State.

3. Paragraphs 1 and 2 are without prejudice to the right of the victims to seek remedies other than those available in the State of origin.

4. States may provide for recourse to international claims settlement procedures that are expeditious and involve minimal expenses.

5. States should guarantee appropriate access to information relevant for the pursuance of remedies, including claims for compensation.

Commentary

(1) Draft principle 6 indicates some broad measures necessary to operationalize and implement the objective set forth in draft principle 4. In one sense, draft principles 4 and 6 together encompass the substantive and procedural measures reflected in the expectation that the State of origin and other States concerned would provide minimum standards without which it would be difficult or impossible to implement the requirement to provide effective remedies, including the opportunity to seek payment of prompt and adequate compensation to victims of transboundary damage.[462] The substantive minimum requirements such as channelling of liability; designating liability without proof of fault; specifying minimum conditions, limitations or exceptions for such liability; and establishing arrangements for financial

[459] On the duty of States to notify and consult with each other with a view to take appropriate actions to mitigate damage, see Principle 18 of the Rio Declaration (footnote 301 above); the Convention on the Transboundary Effects of Industrial Accidents; the Convention on Biological Diversity; and the Cartagena Protocol on Biosafety to the Convention on Biological Diversity as well as the treaties in the field of nuclear accidents and the Convention on early notification of a nuclear accident. See also Sands, *op. cit.* (footnote 362 above), pp. 841–847.

[460] In the *Gabčíkovo–Nagymaros Project* case (see footnote 363 above), in defense of "Variant C" that it implemented on the river Danube appropriating nearly 80 to 90 per cent water of the river Danube, in the face of Hungary's refusal to abide by the terms of the Treaty concerning the construction and operation of the Gabčikovo–Nagymaros system of locks concluded between Czechoslovakia and Hungary (signed at Budapest on 16 September 1977, United Nations, *Treaty Series*, vol. 1109, No. 17134, p. 235), Slovakia argued that "[i]t is a general principle of international law that a party injured by the non-performance of another contract party must seek to mitigate the damage he has sustained" (p. 55, para. 80). The Court, referring to this principle, noted that "[i]t would follow from such a principle that an injured State which has failed to take the necessary measures to limit the damage sustained would not be entitled to claim compensation for that damage which could have been avoided" (*ibid.*). The Court observed that "[w]hile this principle might thus provide a basis for the calculation of damages, it could not, on the other hand, justify an otherwise wrongful act" (*ibid.*). It is a different matter that the Court found the implementation of Variant C as a wrongful act and hence did not go further to examine the principle of the duty of the affected States to mitigate the effects of damage to which they are exposed. The very willingness of the Court to consider any failure in this regard as an important factor in the computation of damages to which those States would eventually be entitled amounts to an important recognition under general international law of the duty imposed on States affected by transboundary harm to mitigate the damage to the best extent they can.

[461] In general, on the criterion of reasonableness in computing costs admissible for recovery, see Wetterstein, "A proprietory or possessory interest …", *loc. cit.* (footnote 323 above), pp. 47–50.

[462] René Lefeber perceptively noted that the purpose of minimum standards, in the context of developing a legal regime addressing transboundary damage, is to facilitate victims obtaining prompt (timely), adequate (quantitatively) and effective (qualitative) compensation. It has procedural and substantive sides. See Lefeber, *op. cit.* (footnote 330 above), pp. 234–236.

guarantees or securities to cover liability are addressed within the framework of draft principle 4. On the other hand, draft principle 6 deals with the procedural minimum standards. They include equal or non-discriminatory access to justice, availability of effective legal remedies, and recognition and enforcement of foreign judicial and arbitral decisions. Draft principle 6 also addresses the need to provide recourse to international procedures for claim settlements that are expeditious and less costly.

(2) Paragraphs 1, 2 and 3 focus on domestic procedures and the development and confirmation of the principle of equal or non-discriminatory access. The 1974 Convention on the protection of the environment between Denmark, Finland, Norway and Sweden is one of the most advanced forms of international cooperation available among States recognizing the right to equal access to justice. This was of course possible because the environmental standards are largely the same among the Nordic countries. Article 3 of the Convention provides equal right of access to persons who have been or may be affected by an environmental harmful activity in another State. The right of equal access to courts or administrative agencies of that State is provided "to the same extent and on the same terms as a legal entity of the State in which the activity is being carried on". The transboundary applicant is allowed to raise questions concerning the permissibility of the activity, appeal against the decisions of the Court or the administrative authority and seek measures necessary to prevent damage. Similarly, the transboundary victim could seek compensation for damage caused on terms no less favourable than the terms under which compensation is available in the State of origin.[463]

(3) The principle of equal access goes beyond the requirement that States meet a minimum standard of effectiveness in the availability of remedies for transboundary claimants by providing for access to information, and helping appropriate cooperation between the relevant courts and national authorities across national boundaries. This principle is also reflected in Principle 10 of the Rio Declaration[464] and in Principle 23 of the World Charter for Nature.[465] It is also increasingly recognized in national constitutional law regarding protection of the environment.[466]

(4) Paragraph 1 sets forth the obligation to provide domestic judicial and administrative bodies with the necessary jurisdiction and competence to be able to entertain claims concerning transboundary harm, as well as effective remedies. It stresses the importance of removing hurdles in order to ensure participation in administrative hearings and judicial proceedings. Once the transboundary damage occurs, transboundary victims should be provided equal access to administrative or quasi-judicial and/or judicial bodies charged with jurisdiction to deal with claims for compensation. As already described in the commentary to draft principle 4, this may be satisfied by providing access to domestic courts in accordance with due process or by negotiation with victims or States concerned.

(5) Paragraph 2 emphasizes the importance of the principle of non-discrimination in the determination of claims concerning hazardous activities.[467] This principle provides that the State of origin should ensure no less prompt, adequate and effective remedies to victims of transboundary damage than those that are available to victims within its territory for similar damage. The principle of non-discrimination could thus be seen to be referring to both procedural and substantive requirements. In terms of its procedural aspects, it means that the State of origin should grant access to justice to the residents of the affected State on the same basis as it does for its own nationals or residents. This is an aspect which is gaining increasing acceptance in State practice.[468]

(6) The substantive aspect of the principle, on the other hand, raises more difficult issues concerning its precise content and lacks similar consensus.[469] On the face of it, as long as the same substantive level of remedies are available to the nationals as are provided to the transboundary victims, the requirements of the principle appear to

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[463] For comment on the Convention, see S. C. McCaffrey, "*Private remedies for transfrontier environmental disturbances", IUCN Environmental Policy and Law Paper, No. 8* (1975), pp. 85–87. The main contribution of the Convention is the creation of a Special Administrative Agency to supervise the transboundary nuisances in each State party for more intensive intergovernmental consultation and cooperation. The Agency is given standing before the courts and administrative bodies of other contracting States. The Convention does not apply to pending causes, however. It does not have an express provision for waiver of State immunity. It is also silent on the question of the proper applicable law for the determination of liability and calculation of indemnities, although it is assumed that the proper law for the purposes will be the law of the place where the injury is sustained. In contrast, the OECD recommended to its members a more gradual implementation of flexible bilateral or multilateral accords on measures for the facilitation at the procedural level of transnational pollution abatement litigation. See McNamara, *op. cit.* (footnote 420 above), pp. 146–147.

[464] See footnote 301 above.

[465] General Assembly resolution 37/7 of 28 October 1982, annex.

[466] See Cuperus and Boyle, *loc. cit.* (footnote 419 above), p. 407.

[467] It may be recalled that article 16 of the draft articles on prevention provides for a similar obligation for States in respect of the phase of prevention during which they are required to manage the risk with all due diligence (*Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 168–169). A similar provision covering the phase where injury actually occurred, despite all best efforts to prevent damage, can be found in article 32 of the 1997 Watercourses Convention.

[468] See A. Kiss and D. Shelton, *International Environmental Law*, Ardsley (New York), Transnational Publishers, 2004, pp. 201–203; and Birnie and Boyle, *International Law …*, *op. cit.* (footnote 306 above), pp. 269–270. According to the procedural aspect of non-discrimination, some requirements of the procedural laws of the State of origin should be removed; among them are, as Cuperus and Boyle note, the "security for costs from foreign plaintiffs, the denial of legal aid to such plaintiffs, and the rule found in various forms in certain jurisdictions that deny jurisdiction over actions involving foreign land" (Cuperus and Boyle, *loc . cit.* (footnote 419 above), p. 408).

[469] Birnie and Boyle note that insofar as it is possible to review State practice on such a disparate topic as equal access, it is not easy to point to any clear picture (Birnie and Boyle, *International Law…, op. cit.* (footnote 306 above), pp. 271–274). On the limitations of the non-discrimination rule, *ibid*., pp. 274–275. Also see Xue, *op. cit.* (footnote 323 above), pp. 106–107. See also Kiss and Shelton, *op. cit.* (footnote 468 above), pp. 201–203; Birnie and Boyle, *International Law…, op. cit.* (footnote 306 above) pp. 269–270; and P.-M. Dupuy, "La contribution du principe de non -discrimination à l'élaboration du droit international de l'environnement", *Revue québécoise de droit international*, vol. 7, No. 2 (1991–1992), p. 135. For the view that the principle of non-discrimination has become a principle of general international law, see H. Smets, "Le principe de non-discrimination en matière de protection de l'environnement", *Revue européenne de droit de l'environnement*, No. 1 (2000), at p. 3.

have been met. However, the problem arises if nationals themselves are not provided with the minimum substantive standards, in which case the principle of non-discrimination would not guarantee any such minimum standards to foreign victims involved in the transboundary damage. A number of States are in the process of developing minimum substantive standards as part of their national law and procedures.

(7) Paragraph 3 provides a "without prejudice" clause. It should be noted that paragraphs 1 and 2 do not alleviate problems concerning choice of law or choice of forum, which, given the diversity and lack of any consensus among States, may be a significant obstacle to the delivery of prompt, adequate and effective judicial recourse and remedies to victims,[470] particularly if they are poor and not assisted by expert counsel in the field. States could move matters forward by promoting the harmonization of laws and by agreeing to extend such access and remedies.

(8) It may be noted with respect to choice of forum that instead of the law of the domicile[471] of the operator, the claimant may seek recourse to a forum which he or she deems most appropriate to pursue the claim. This may be the forum of the State where an act or omission causing injury took place or where the damage arose.[472] It has been asserted that the provision of such a choice is considered to be based on "a trend now firmly established in both international Conventions on international jurisdiction and in national systems".[473] Under the Convention concerning judicial competence and the execution of decisions in civil and commercial matters, signed at Brussels in 1968, remedies may be made available only in the jurisdiction of a party where: (*a*) the act or omission causing injury took place; (*b*) the damage was suffered; (*c*) the operator has his domicile or her habitual residence; or (*d*) the operator has his or her principal place of business. Article 19 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, article 17 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal, and article 13 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters provide for similar choice of forum.

(9) In the matter of choice of law, State practice is not uniform: different jurisdictions have adopted either the law that is most favourable to the victim or the law of the place which has the most significant relationship with the event and the parties.[474]

(10) Paragraph 4 highlights a different aspect in the process of ensuring the existence of remedies for victims of transboundary harm. It is intended to bring more specificity to the nature of the procedures that may be involved other than domestic procedures. It refers to "international claims settlement procedures". Several procedures could be envisaged. For example, States could, in the case of transboundary damage, negotiate and agree on the quantum of compensation payable or even make payment *ex gratia*.[475] These may include mixed claims commissions and negotiations for lump sum payments. The international component does not preclude possibilities whereby a State of origin may make a contribution to the State affected to disburse compensation through a national claims procedure established by the affected State. Such negotiations need not, unless otherwise desired, bar negotiations between the State of origin and the private injured parties, and such parties and the person responsible for the activity causing significant damage. A lump sum compensation could be agreed either as a result of a trial or an out-of-court settlement.[476] Victims could immediately

[470] See Cuperus and Boyle, *loc. cit.* (footnote 419 above), pp. 403–411, at p. 406. See also Lefeber, *op. cit.* (footnote 330 above), pp. 264–266, on the divergence of State practice in matters of deciding on the choice of forum and applicable law.

[471] This is based on the principle *actor sequitur forum rei*, a principle that promotes the policy that the defendant is best able to defend himself or itself in the courts of the State in which he or it is domiciled. This is justified on the ground that the force of a judgment is directed against the defendant. However, while the domicile of the natural person is left to be determined by the law of each State, the case of the nationality of the legal persons or the corporations is less settled. The Convention concerning judicial competence and the execution of decisions in civil and commercial matters, signed at Brussels in 1968, and the Convention on jurisdiction and the enforcement of judgments in civil and commercial matters, signed at Lugano in 1988, "leave the determination of the domicile to the law that is determined by the law of conflict of laws as administered by the courts of the State where the claim is filed" (C. von Bar, "Environmental damage in private international law", *Recueil des cours: Collected courses of the Hague Academy of International Law 1997*, vol. 268 (1997), p. 336).

[472] See the second report on transnational enforcement of environmental law (by Christophe Bernasconi and Gerrit Betlem), International Law Association, *Report of the Seventy-First Conference* (footnote 331 above), pp. 896–938, at p. 900. A defence against this ground of jurisdiction is admissible, however, if it can be established that damage in the State, not being the State of origin, is not foreseeable.

[473] *Ibid*., p. 899.

[474] The "most favourable law principle" is adopted in several jurisdictions in Europe, Tunisia and the Bolivarian Republic of Venezuela. However, United States law appears to favour the law of the place which has the "most significant relationship" with the event and the parties, *ibid*., pp. 911–915.

[475] In the case of damage caused to fishermen, nationals of Japan, due to nuclear tests conducted by the United States of America in 1954 near the Marshall Islands, the latter paid to Japan US$ 2 million (see *Department of State Bulletin* (Washington D.C.), vol. 32, No. 812 (January 1955), pp. 90–91). For a similar payment of Can$ 3 million by way of compensation by the Union of Soviet Socialist Republics to Canada following the crash of the Cosmos 954 in January 1978, see ILM, vol. 18 (1979), p. 907. Sands notes that, although several European States paid compensation to their nationals for damage suffered due to the Chernobyl nuclear accident, they did not attempt to make formal claims for compensation, even while they reserved their right to do so (Sands, *op. cit.* (footnote 362 above), pp. 886–889). The State may agree to pay *ex gratia* directly to the victims, e.g. the United States Government agreed to pay to Iranian victims of the shooting of the Iranian Airbus 655 by the USS "Vincennes". States may also conclude treaties setting up international claims commission to settle compensation claims as between private parties. See Lefeber, *op. cit.* (footnote 330 above), p. 238, footnote 21. Mention may also be made of the draft articles 21 and 22 adopted by the Working Group established by the Commisison in 1996 on international liability for injurious consequences arising out of activities not prohibited by international law and included in its report to the Commission. Draft article 21 recommended that the State of origin and the affected States should negotiate at the request of either party on the nature and extent of compensation and other relief. Draft article 22 referred to several factors that States may wish to consider for arriving at the most equitable quantum of compensation (see *Yearbook ... 1996*, vol. II (Part Two), annex I, at pp. 130–132).

[476] In connection with the Bhopal gas leak disaster, the Government of India attempted to consolidate the claims of the victims. It sought to seek compensation by approaching the United States court first, but the action failed on grounds of *forum non conveniens*. The matter was

(*Continued on next page.*)

be given reasonable compensation on a provisional basis, pending a decision on the admissibility of the claim and the award of compensation. National courts, claims commissions or joint claims commissions established for this purpose could examine the claims and settle the final payments of compensation.[477]

(11) The United Nations Compensation Commission[478] and the Iran–United States Claims Tribunal[479] may offer themselves as useful models for some of the procedures envisaged under paragraph 4.

(12) The Commission is aware of the practical difficulties, such as expenses and the delays involved, in pursuing claims in a transnational context or on an international plane. There is justification in the criticism, applicable to some cases but not all, that civil law remedies requiring victims to pursue their claims in foreign national judicial and other forums may be "very complex, costly and ultimately devoid of a guarantee of success".[480] The reference to procedures that are expeditious and involving minimal expenses is intended to respond to this aspect of the matter and reflect the desire not to overburden the victim with an excessively lengthy procedure which may act as a disincentive. There have been several incidents of damage in recent years involving settlement of claims for compensation.[481] Some of them are settled out of court. Others have been settled by recourse to civil liability regimes. The conclusion from the experience of different cases is that both States and concerned entities representing the victims must get involved to settle claims out of court or the victims must be given equal or non-discriminatory right of access to civil law remedies.[482]

(13) Paragraph 5 addresses access to information. This is an important matter without which the principle of equal access envisaged in paragraphs 1, 2 and 3 for victims of transboundary damage cannot be realized expeditiously or without great expense. Paragraph 5 may equally be applicable in respect of the international procedures contemplated in paragraph 4. States should collect and maintain the information as part of the performance of their duties of due diligence and make it available to those that seek it.[483] Elements of information include: the precise nature of the risk; the standards of safety required; the financial basis of the activity; provisions concerning the insurance or financial guarantees the operator is required to maintain; applicable laws and regulations; and institutions designated to deal with complaints, including complaints about non-compliance with the required safety standards and the redress of grievances.

(14) Access to information is an evolving principle. Even in countries with some advanced forms of governance and modern elements of administrative law, development of the concept and making it a legally enforceable

(*Footnote 476 continued.*)

then litigated before the Supreme Court of India. The Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985 provided the basis for the consolidation of claims. The Supreme Court of India, in the *Union Carbide Corporation* v. *Union of India and others* case, gave an order settling the quantum of compensation to be paid in a lump sum. It provided for Union Carbide to pay a lump sum of US$ 470 million to the Union of India in full settlement of all claims, rights and liabilities related to and arising out of the Bhopal gas disaster (see *All India Reporter 1990*, vol. 77, pp. 273 *et seq.*). The original claim of the Government of India was over US$ 1 billion.

[477] For the April 2002 award of US$ 324,949,311 to the people of Enewetak in respect of damages to the land arising out of nuclear programmes carried out by the United States between 1946–1958, see *In the Matter of the People of Enewetak* (footnote 369 above).

[478] On the procedure adopted by the United Nations Claims Commission, see M. Kazazi, "Environmental damage in the practice of the United Nations Compensation Commission", in Bowman and Boyle (eds.), *op. cit.* (footnote 333 above), pp. 111–131.

[479] The rules of procedure of the Iran–United States Claims Tribunal are available at www.iusct.org.

[480] Lefeber, *op. cit.* (footnote 330), p. 259 and footnote 104.

[481] In the explosion of the Ixtoc I oil well in June 1979 in the Bay of Campeche off the coast of Mexico, the oil rig was owned by a United States company, controlled by a Mexican State-owned company and operated by a privately-owned Mexican drilling company. The incident involved US$ 12.5 million in clean-up costs and an estimated US$ 400 million loss for the fishing and tourism industry. The case was settled out of court between the United States Government and the United States company without going into questions of formal liability. The settlement included US$ 2 million paid to the United States Government and US$ 2.14 million towards losses suffered by fishermen, tourist resorts and others affected by the oil spill. See in this respect Lefeber, *op cit.* (footnote 330 above), pp. 239–240. See also ILM, vol. 22 (1983) p. 580. In the Cherry Point oil spill, the Canada and Atlantic Richfield Oil Refinery, a corporation of the United States, settled claims out of court, in respect of an oil spill caused by a Liberian tanker while unloading oil at Cherry Point (Washington State) in United States waters, causing oil pollution to the beaches of the Canadian West coast. See in this respect Lefeber, p. 249. See also *The Canadian Yearbook of International Law*, vol. XI (1973), tome 11, p. 333. In the Sandoz case, the water used to extinguish fire that broke out at the Sandoz Chemical Corporation on 1 November 1986 polluted the River Rhine, and caused significant harm downstream in France, Germany and the Netherlands. Economic harm had to be compensated. This involved clean-up costs and other response measures including monitoring and restoration costs. Pure economic loss was also involved as a result of loss caused to the freshwater fishing industry. The settlement of claims took place at the private level. More than 1,000 claims were settled for a total of 36 million German marks. Most of the compensation was paid to States, but some private parties also received compensation. See in this respect Lefeber, pp. 251–252. In the Bhopal gas leak case, the claim was settled out of court between the Union Carbide Corporation, the United States and the Government of India for US$ 470 million, while the initial claim for compensation was much more than that. See in this respect Lefeber, pp. 252–254. In the *Mines de Potasse d'Alsace* case, a French company polluted the River Rhine with chlorides through discharge of waste salts. Such discharge was considered a normal operation. But the high salinity of the river was a matter of concern downstream to potable water companies, industry and market gardeners, which traditionally used the water for their commerce. The Governments concerned, France, Germany, the Netherlands and Switzerland, negotiated an agreement to reduce the chloride pollution in 1976 at Bonn (Convention on the protection of the Rhine against pollution by chlorides) which came into force only in 1985 and did not last. Another Protocol was concluded in 1991 (Additional Protocol to the Convention on the protection of the Rhine against pollution by chlorides). Still the problem of high salinity continued. As the Government of the Netherlands was not willing to bring a claim against the Government of France, some victims launched private litigation in the courts of the Netherlands in 1974. The litigation continued until 1988 when the case was settled out of court, just before the Supreme Court of the Netherlands ruled in favour of the plaintiffs. The settlement was around US$ 2 million in favour of the cooperatives of market gardeners. The claims of the potable water industry did not succeed in the French court on the ground that there was no sufficient causal link between the discharge of waste salts and the corrosion damage for which the water industry sought compensation. See in this respect Lefeber, pp. 254–258. See also the survey prepared by the Secretariat of liability regimes (footnote 401 above), paras. 399–433.

[482] See Lefeber, *op. cit.* (footnote 330 above), p. 260.

[483] For example, Section 4 of the Right to Information Act, 2005 of India obligates all public authorities to collect and maintain, if possible in computerized form, all records duly catalogued and indexed in a manner and the form which facilitates the right to information under the Act. For the text of Act 22 of 2005, see http://indiacode.nic.in.

right, in all its varied dimensions, is taking time.[484] Such a right of access is contained in several instruments.[485]

(15) The reference to "appropriate" access in paragraph 5 is intended to indicate that in certain circumstances access to information or disclosure of information may be denied. It is, however, important that even in such circumstances information is made readily available concerning the applicable exceptions, the grounds for refusal, procedures for review and the charges applicable, if any. Where feasible, such information should be accessible free of charge or at minimal expense.

(16) Also implicated in the present draft principles is the question of the recognition and enforcement of foreign judgments and arbitral awards. Such recognition and enforcement would be essential to ensure the effects of decisions rendered in jurisdictions in which the defendant did not have enough assets, so that victims could recover compensation in other jurisdictions where such assets are available. Most States subject the recognition and enforcement of foreign judgments and arbitral awards to specific conditions prescribed in their law or enforce them in accordance with their international treaty obligations. Generally, fraud, the lack of a fair trial, public policy and irreconcilability with the earlier decisions could be pleaded as grounds to deny recognition and enforcement of foreign judgments and arbitral awards. Other conditions may apply or other possibilities may exist.[486]

Principle 7. Development of specific international regimes

1. Where, in respect of particular categories of hazardous activities, specific global, regional or bilateral agreements would provide effective arrangements concerning compensation, response measures and international and domestic remedies, all efforts should be made to conclude such specific agreements.

2. Such agreements should, as appropriate, include arrangements for industry and/or State funds to provide supplementary compensation in the event that the financial resources of the operator, including financial security measures, are insufficient to cover the damage suffered as a result of an incident. Any such funds may be designed to supplement or replace national industry-based funds.

Commentary

(1) Draft principle 7 corresponds to the set of provisions contained in draft principle 4, except that they are intended to operate at international level. It builds upon Principle 22 of the Stockholm Declaration and Principle 13 of the Rio Declaration.[487] Paragraph 1 encourages States to conclude specific global, regional or bilateral agreements where such approaches would provide the most effective arrangements in the areas which the present principles are concerned with: (*a*) compensation; (*b*) response measures; and (*c*) redress and remedies.

(2) Paragraph 2 encourages States, as appropriate, to include in such arrangements various financial security schemes, whether through industry funds or State funds, in order to make sure that there is supplementary funding for victims of transboundary damage. It points to the need for States to enter into specific arrangements and tailor them to the particular circumstances of individual hazardous activities. It also recognizes that there are several variables in the regime concerning liability for transboundary damage that are best left to the discretion of individual States or their national laws or practice to select or choose, given their own particular needs, political realities and stages of economic development. Arrangements concluded on a regional basis with respect to a specific category of hazardous activities are likely to be more fruitful and durable in protecting the interest of their citizens, the environment and natural resources on which they are dependent.

(3) It may also be recalled that from the very inception of the topic, the Commission proceeded on the assumption that its primary aim was "to promote the construction of regimes to regulate without recourse to prohibition, the conduct of any particular activity which is perceived to entail actual or potential dangers of a substantial nature and to have transnational effects".[488]

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[484] The Scandinavian countries, the countries of the European Union and the United States have progressed along the route to establish the right of access to information, but much remains to be achieved even in the context of those countries, and even more so in other jurisdictions. See in this respect *Secrecy and Liberty: National Security, Freedom of Expression and Access to Information*, S. Coliver, P. Hoffman, J. Fitzpatrick and S. Bowen (eds.), The Hague, Kluwer Law International, 1999 (International Studies in Human Rights, vol. 58); and U. Öberg, "EU citizens' right to know: the improbable adoption of a European Freedom of Information Act", in A. Dashwood and A. Ward (eds.), *Cambridge Yearbook of European Legal Studies*, vol. 2 (1999), pp. 303–328. "Right to know" laws have been enacted in Canada and in at least 25 states in the United States. For information on these and other initiatives and analysis of the right of access to information, see P. H. Sand, "Information disclosure as an instrument of environmental governance", *Zeitschrift für ausländisches öffentlisches Recht und Völkerrecht—Heidelberg Journal of International Law*, vol. 63 (2003), pp. 487–502. On the availability of the right to information in the context of access to environmental justice in New Zealand, see P. Salmon, "Access to environmental justice", *New Zealand Journal of Environmental Law*, vol. 2 (1998), pp. 1–23, at pp. 9–11. The World Bank is also implementing procedures to promote public disclosure of operational information concerning the projects it supports worldwide. See in this respect I. F. I. Shihata, *The World Bank Inspection Panel*, New York, Oxford University Press, 1994.

[485] See the 1998 Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 1998, which has been in force since 30 October 2001; the Convention for the protection of the marine environment of the North-East Atlantic (OSPAR Convention) (article 9); the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment (articles 15 and 16), the 1995 UNECE Guidelines on Access to Environmental Information and Public Participation in Environmental Decision-making ("Sofia Guidelines") (articles 4 and 5), ECE/CEP/24; and Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information, *Official Journal of the European Union*, No. L 41, 14 February 2003, p. 26. See also the survey prepared by the Secretariat of liability regimes (footnote 401 above), paras. 287–336.

[486] For example, the United States District Court which dismissed the Indian claims for compensation in the Bhopal case on grounds of *forum non conveniens* and referred the plaintiffs to courts in India, stipulated that judgments rendered in India could be enforced in the United States. See Lefeber, *op. cit.* (footnote 330 above), pp. 267–268.

[487] See above, footnotes 312 and 301, respectively.

[488] Preliminary report on international liability for injurious consequences arising out of acts not prohibited by international law, by Mr. Robert Q. Quentin-Baxter, Special Rapporteur, *Yearbook ... 1980*, vol. II (Part One), document A/CN.4/334 and Add.1–2, p. 250, para. 9.

Principle 8. Implementation

1. Each State should adopt the necessary legislative, regulatory and administrative measures to implement the present draft principles.

2. The present draft principles and the measures adopted to implement them shall be applied without any discrimination such as that based on nationality, domicile or residence.

3. States should cooperate with each other to implement the present draft principles.

Commentary

(1) Paragraph 1 restates what is implied in the other draft principles, namely, that each State should adopt legislative, regulatory and administrative measures for the implementation of these draft principles. It intends to highlight the significance of national implementation through domestic legislation of international standards or obligations agreed to by States parties to international arrangements and agreements.

(2) Paragraph 2 emphasizes that these draft principles and any implementing provisions shall be applied without any discrimination on any grounds prohibited by international law. The emphasis on "any" is intended to denote that discrimination on any such ground is not valid. The references to nationality, domicile or residence are only illustrative. For example, discrimination on the basis of race, gender, religion or belief would obviously be precluded as well.

(3) Paragraph 3 is a general hortatory clause, which provides that States should cooperate with each other to implement the present draft principles. It is modelled on article 8 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters. The importance of implementation mechanisms cannot be overemphasized. From the perspective of general and conventional international law, it operates at the international plane essentially as between States and it requires implementation at the national level through specific domestic constitutional and other legislative techniques. It is important that States enact suitable domestic legislation to implement these principles, lest victims of transboundary damage be left without adequate recourse.