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, will appear in *Yearbook of the International Law Commission, 2006*, vol. II, Part Two.

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 but then specifically recalls the Draft articles on the Prevention of Transboundary Harm from Hazardous Activities.

(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 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 (b) that such a regime should be without prejudice to the relevant rules of State responsibility adopted by the Commission in 2001.[304] 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,

[304] For the text and commentaries of the articles on responsibility of States for Internationally wrongful acts, *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), para. 77.

which the Commission also adopted in 2001.[305] 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.[306] 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

---

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

[306] See also *ibid*., *Fifty-seventh Session, Supplement No. 10* (A/57/10), para. 447.

prevention and these entail certain minimum standards of due diligence.[307] 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, or 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

---

[307] Birnie and Boyle have observed in respect of the draft article on prevention that "… there is ample authority in treaties and case law, and State practice for regarding … provisions of the Commission's draft convention 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", Patricia Birnie and Alan Boyle, *International Law and the Environment* (Oxford: Oxford University Press, 2002) (2nd ed.), p. 113.

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 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,[308]

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,

---

[308] *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), para. 97.

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 two Draft Conventions on the Elimination of Future Statelessness and on the Reduction of the Future Statelessness, the Draft articles on the Nationality of natural persons in relation to the succession of States, as well as with respect to the draft articles on prevention. Since the Commission would be presenting 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 on Environment and Development.[309] 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 Stockholm Declaration on the Human Environment. 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.

---

[309] *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.*

(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 prevention of transboundary harm from hazardous activities. The interrelated nature of the concepts of "prevention" and "liability" needs no particular emphasis in the context of the work of the Commission.[310] 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

[310] See the recommendation of the 2002 Working Group of the Commission, *Official Records of the Genera Assembly, Fifty-seventh Session, Supplement No. 10 and corrigendum* (A/57/10 and Corr.1), paras. 447-448.

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.[311]

(3) Following the same approach adopted in the case of the draft articles on prevention, the Commission opted to dispense with 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[312] 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

---

[311] *Ibid., Fifty-sixth Session, Supplement No. 10* (A/56/10), para. 98, para. (1) of the commentary to article 2 (a) of the draft articles on prevention.

[312] For example, various liability regimes deal with the type of activities which come under their scope: the 1992 Convention on the Protection of Marine Environment of the Baltic Sea Area, [IMO 1] LDC.2/Circ.303 (see also United Nations, Law of the Sea Bulletin, No. 22 (1993), p. 54); the 1992 Convention on the Transboundary Effects of Industrial Accidents (doc. ENVWA/R.54 and Add.1), reprinted in ILM vol. 31 (1992), p. 1333; annex I to the 2003 Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters (2003 Kiev Protocol), UNECE document MP/WAT/2003/1-CP.TEIA/2003/3 of 11 March 2003; annex II to the Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Lugano Convention) (*European Treaty Series*, No. 150. See also ILM vol. 32 (1993), p. 128), 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, installations or sites for thermal degradation of solid, gaseous or liquid wastes under reduced oxygen supply, etc., 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 the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage (OJL 143/56. 30.4.2004, vol. 47).

consequences" in 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.[313]

(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.[314] 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.[315] In such a case, State responsibility could be

---

[313] For the commentaries on prevention see *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), para. 98, commentary to draft article 1.

[314] *Yearbook … 1973*, vol. II, para. 38.

[315] *Official Records of the General Assembly, Fifty-seventh Session, Supplement No. 10* (A/56/10), para. 98, commentary to article 1, para. (6), p. 382. 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; Alan E. Boyle, "State Responsibility and International Liability for Injurious Consequences of Acts not Prohibited by International Law: A necessary distinction?", ICLQ, vol. 39 (1990), pp. 1-25; Karl Zemanek, "State Responsibility and Liability", in W. Lang, H. Neuhold, K. Zemanek (eds.), *Environmental Protection and International Law* (London: Graham & Trotman, 1991), p. 197; P.S. Rao, the Second Report on Prevention of Transboundary Damage from Hazardous Activities, document A/CN.4/501, paras. 35-37. J. Barboza, "La responsabilité 'causale' à la Commission du droit international", AFDI, 1988, pp. 513-522; P. Cahier, "Le problème de la responsabilité pour risque en droit international", in IUHEI, les relations internationales dans un monde en mutation (Leyden: Sijthoff, 1977), pp. 409-434; C-G. Laubet, "Le droit internationale enquête d'une responsabilité pour les dommages résultant d'activités qu'il n'interdit pas", AFDI, 1983, pp. 99-120; D. Levy, "Responsabilité pour omission et responsabilité pour risque en droit international

invoked to implement not only the obligations of the State itself but also the civil responsibility or duty of the operator.[316] Indeed, this is well understood throughout the work on draft articles on prevention.[317]

(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 in the event 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.[318] 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.[319]

---

public", RGDIP, 1961, pp. 744-764; P. Strurma, "La responsabilité en dehors de l'illicite en droit international économique", PYBIL, 1993, pp. 91-112.

[316] See P.M. Dupuy, La responsabilité internationale des États pour les dommages d'origine techologique et industrielle (Paris: Pedone, 1977), p. 319; 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 Said Mahmoudi (eds.), *Current International Law Issues: Nordic Perspectives* (Essays in honour of Jerzy Sztucki) (Boston: M. Nijhoff, 1994); and Fouad Bitar "Les mouvements transfrontaliers de déchets dangereux selon la Convention de Bâle", *Etude des régimes de responsabilité* (Paris: Pedone, 1997), pp. 79-137. 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?" in *Revue générale de droit international public* (1997-4), pp. 873-903; Teresa A. Berwick, "Responsibility and Liability for Environmental Damage: A Roadmap for International Environmental Regimes", *Georgetown International Environmental Review* (1998), pp. 257-267; and P.M. Dupuy, "A propos des mésaventures de la responsabilité internationale des États dans ses rapports avec la protection internationale de l'environnement", in M. Prieur & C. Lambrechts, *Les Hommes et l'environnement: Études en hommage à Alexandre Kiss* (Paris: Frison-Roche, 1998).

[317] *Official Records of the General Assembly, Fifty-eighth Session, Supplement No. 10* (A/58/10), para. 443.

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

[319] See Peter Wetterstein "A Proprietary or Possessory Interest: A Condition *sine qua non* for claiming damage for environmental impairment", in Peter Wetterstein, *Harm to the Environment: the Right to Compensation and Assessment of Damage* (Oxford: Clarendon Press (1997)), p. 30. See also Xue Hanqin, *Transboundary Damage in International Law* (Cambridge: Cambridge University Press, 2003), pp. 19-105 and 113-182.

(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.[320]

(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".[321] 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.[322] The word "transboundary" qualifies "damage" to stress the transboundary orientation of the scope of the present principles.

---

[320] See also *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), para. 98, the commentary to draft article 2, para. (1), p. 387.

[321] *Ibid*., para. 98, the commentary to draft article 1, paras. (7)-(12).

[322] Damage is defined in article 2, para. 2 (c) of the 1999 Basel Protocol on Liability and Compensation for Damage Resulting from the Transboundary Movement of Hazardous Wastes and Their Disposal (Document UNEP-CHW.5/29); article 2, para. 2 (d) of the 2003 Kiev Protocol; article 2, para. 7 of the 1993 Lugano Convention; article 1, para. 6 of the 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS) (IMO document LEG/CONF.10/8/2. See also ILM vol. 35 (1996) 1415); article 1, para. 10 of the 1989 Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD) (Doc. ECE/TRANS/79, for text see also *Revue de droit uniforme* (UNIDROIT) 1989 (I), p. 280). See also article 2, para. 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 (OJ L 143/56. 30.4.2004. Volume 47);

(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.[323] 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;

---

article I (a) of the 1972 Convention on International Liability for Damage Caused by Space Objects of 1972 (United Nations, *Treaty Series*, vol. 961, p. 187).

Pollution damage is defined in article 1, para. 6 of the 1969 International Convention on Civil Liability for Oil Pollution Damage (United Nations, *Treaty Series*, vol. 973, p. 3); article 1, para. 6 of the 1992 International Convention on Civil Liability for Oil Pollution Damage (IMO document LEG/CONF.9/15. See also Birnie and Boyle, *Basic Documents on International Law and the Environment* (Oxford: Clarendon Press, 1995), pp. 91-106); article 1, para. 9 of the 2001 International Convention on Civil Liability for Bunker Oil Pollution Damage (IMO document LEG/CONF.12/DC/1); article 1, para. 6 of the 1977 International Convention on Civil Liability for Oil Pollution Damage resulting from the Exploration for and Exploitation of Seabed Mineral Resources (ILM vol. 16 (1977) 1451).

For definition of nuclear damage, see article I, para. 1 k of 1963 of the Vienna Convention on Civil Liability for Nuclear Damage (ILM vol. 2 (1963) 727); article I, para. 1 (k) of the 1997 Protocol to Amend the 1963 Vienna Convention (ILM vol. 36 (1997) 1462); article 1 of the 1997 Convention on Supplementary Compensation for Nuclear Damage (ILM vol. 36 (1997) 1473); article I, para. (a) (vii) of the 2004 Protocol to amend the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy (www.nea.fr/html/law).

See also article 1 (15) of the 1988 Convention on the Regulation of Antarctic Mineral Resource Activities (ILM vol. 27 (1988) 859), which defines damage to the Antarctic environment or dependent or associated ecosystems; and the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses (General Assembly resolution 51/229 of 21 May 1997, for text see UN document A/51/869. See also ILM vol. 36 (1997) 700) which seeks in article 7 to "prevent the causing of significant harm". Article 2 (b) of Annex VI of the Protocol on Environmental Protection to the Antarctic Treaty on Liability arising from environmental emergencies defines "environmental emergency" means "any accidental event that … results in, or imminently threatens to result in, any significant and harmful impact on the Antarctic environment".

[323] *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), para. 98, the commentary to draft article 2, paras. (16) and (17), p. 386.

(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 acquire 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.[324] The *Lake Lanoux* award made reference to serious injury.[325] A number of conventions have also referred to "significant", "serious" or "substantial" harm or damage as the threshold for giving rise to

[324] *Trail Smelter Arbitration (United States of America v. Canada)* (Second award); UNRIAA, vol. III, p. 1905 at p. 1965.

[325] *Lake Lanoux Arbitration (France v. Spain), ibid*., vol. XII, pp. 281-317.

legal claims.[326] "Significant" has also been used in other legal instruments and domestic law.[327] The threshold is designed to prevent frivolous or vexatious claims.

(2) The term "significant" is understood to refer to *something more than "detectable" but need not be at the level of "serious" or "substantial"*.[328] 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,

---

[326] See, for example, article 4 (2) of the Convention on the Regulation of Antarctic Mineral Resource Activities (ILM vol. 27 (1988), p. 868); articles 2 (1) and (2) of the Convention on Environmental Impact Assessment in a Transboundary Context (ILM vol. 30 (1991), p. 802); 1991 UNECE Convention on the Transboundary Effects of Industrial Accidents (article 1 (d)); and article 7 of the Convention on the Non-navigational Uses of International Watercourses. See also Phoebe N. Okowa, *State Responsibility for Transboundary Air Pollution in International Law* (Oxford: OUP, 2000), p. 176; Rene 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* (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 (1991), 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: see Rudiger Wolfrum, Christine Langenfeld and Petra Minnerop, *Environmental Liability in International Law - Towards a Coherent Conception* (Berlin: Erich Schmidt Verlag), 2005, p. 501.

[327] 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, Rios y Lagos Internacionales, 4th ed. 1971), p. 132; the 1990 UN/ECE Guidelines on Responsibility and Liability Regarding Transboundary Water Pollution; the Helsinki Rules on the Uses of the Waters of International Rivers, article 10, *International Law Association, Report of the Fifty-second Conference* (Helsinki, 1966), p. 496; article 16 of the 2004 Berlin Rules on Water, available at >http://www.ila-hq.org/pdf/Water%20Resources/Final%20Report%202004.pdf >); paragraphs 1 and 2 of General Assembly resolution 2995 (XXVII) of 15 December 1972 concerning cooperation between States in the field of the environment; Recommendation of the Council of the Organization for Economic Cooperation and Development (OECD) on Principles concerning Transfrontier Pollution, 1974, para. 6, OECD, Non-Discrimination in Relation to Transfrontier Pollution: Leading OECD Documents, p. 35, reprinted in ILM vol. 14 (1975), p. 246; the 1980 Memorandum of Intent Concerning Transboundary Air Pollution between the United States and Canada, 32 U.S.T., p. 2541, T.I.A.S. No. 9856; and article 7 of the 1983 Mexico-United States Agreement to Cooperate in the Solution of Environmental Problems in the Border Area, in ILM vol. 22 (1983), p. 1025. The United States has also used the word "significant" in its domestic law dealing with environmental issues: see the *American Law Institute, Restatement of the Law*, Section 601, Reporter's Note 3, pp. 111-112.

[328] *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), para. 98, the commentary to draft article 2, paras. (4) and (5).

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 undergoing change.

(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 at domestic law[329] and in treaty practice.[330] Even those

[329] The Environmental Liability Act of Germany for example covers anybody who suffers death or personal injury. The Environmental Damage Compensation Act of Finland, the Environmental Code of Sweden, the Compensation for Environmental Damage Act of Denmark all cover personal injury. See generally, Peter Wetterstein, "Environmental Damage in the Legal Systems of the Nordic Countries and Germany", in Michael Bowman and Alan Boyle, *Environmental Damage in International Law and Comparative Law: Problems of Definition and Evaluation* (Oxford: OUP, 2002), pp. 222-242.

[330] Some liability regimes provide as follows: article I, paragraph 1 k of the 1963 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 1997 Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage (1997 Vienna Convention), also refers to "(i) loss of life or personal injury; (ii) loss of or damage to property; …" article I, paragraph vii of the 2004 Paris Convention defines nuclear damage to include "1. loss of life or personal injury; 2. loss of or damage to property; …" the CTRD defines the concept of "damage" in paragraph 10 of article 1 "(a) loss of life or personal injury ...; (b) loss of or damage to property ..."; the Basel Protocol 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 Kiev Protocol, 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"; the Lugano Convention defines damage in article 2 (7) as: "a. Loss of life or personal injury; b. Loss or damage to property

liability regimes that exclude application of injury to persons recognize that other rules would apply.[331] 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.[332]

(6) In subparagraph (ii) damage to property, includes loss of or damage to property. Property includes movable and immovable property. There are examples at domestic law[333] and in treaty practice.[334] 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 (2) (c) (ii) of the Basel Protocol, article 2 (7) (b) of the Lugano Convention and article 2 (2) (d) (ii) of the Kiev Protocol 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 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.[335]

(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

---

other than to the installation itself or property held under the control of the operator, at the site of the dangerous activity".

[331] EU Council and Parliament Directive 2004/34/CE on environmental liability 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.

[332] Pollution damage is defined in article 1, para. 6 of the International Convention on Civil Liability for Oil Pollution Damage (United Nations, *Treaty Series*, vol. 973, p. 3); article 1, para. 6 of the 1992 International Convention on Civil Liability for Oil Pollution Damage (IMO document LEG/CONF.9/15), article 1, para. 9.

[333] For example, the Environmental Damage Compensation Act of Finland covers damage to property; Chapter 32 of the Environmental Code of Sweden; and the Compensation for Environmental Damage Act of Denmark covers damage to property.

[334] See examples in footnote 330, above.

[335] Bjorn Sandvik and Satu Suikkari, "Harm and Reparation in International Treaty regimes: An Overview", in Peter Wetterstein, *Harm to the Environment …, op. cit.* p. 57. See generally, Edward H.P. Brans, *Liability for Damage to Public Natural Resources: Standing, Damage and Damage Assessment* (The Hague/London/New York: Kluwer Law International, 2001), pp. 9-63. See also Julio Barboza, Special Rapporteur, Eleventh report, document A/CN.4/468 (1995).

injury or damage to property. These would include loss of earnings due to personal injury. Such damage is supported in treaty practice[336] and under domestic law although different approaches are followed, including in respect of compensation for loss of income. [337] 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 concerning the Protection of World Cultural and Natural Heritage has a comprehensive

---

[336] See for example article I (1) (k) of the 1997 Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage, 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 subparagraph (i) or (ii), insofar as not included in those subparagraphs, 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 of the annex to the 1997 Convention on Supplementary Compensation for Nuclear Damage, which covers and 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 subparagraph (i) or (ii), insofar as not included in those subparagraphs, 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 (vii) of the 2004 Protocol to amend the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy 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 subparagraph 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.

[337] For example, under section 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 …". Similarly, section 252 of the German Civil Code provides that any loss of profit is to be compensated.

definition of cultural heritage.[338] Not all civil liability regimes include aspects concerning cultural heritage under this head. For example, the Lugano Convention 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.[339]

(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 Hague Convention for the Protection of Cultural Property in the event of armed conflict.[340] Moreover, international humanitarian law prohibits commission of hostilities directed against historical monuments and works of art which constitute the cultural heritage of peoples.[341]

(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 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

---

[338] ILM vol.11 (1972) 1294. 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 man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

See also definition of cultural property in article 1 of the 1954 Hague 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 1972 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property.

[339] See also article 1 (2) of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

[340] Done at The Hague on 14 May 1954.

[341] The Additional Protocols to the Geneva Conventions, article 53 of Protocol I and article 16 of Protocol II. See also the Hague Conventions of 1907, particularly Convention IV and its Regulations concerning the Laws and Customs of War on Land, (articles 27 and 56 of the Regulations), and Convention IX, respecting Bombardment by Naval Forces in Time of War (article 5).

incorporated in subparagraphs (iii)-(v) thus not only builds upon trends that have already become prominent as part of recently concluded international liability regimes[342] but opens up possibilities for further developments of the law for the protection of the environment *per se*.[343]

(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.[344] Article 2 (d) (iii) of the Kiev Protocol and article 2 (2) (d) (iii) of the Basel Protocol cover loss of income directly deriving from an economic interest in any use of the environment, incurred

---

[342] For an analysis of these developments, see Louise de la Fayatte, "The Concept of Environmental Damage in International Liability Regimes", in Michael Bowman and Alan Boyle, *Environmental Damage in International and Comparative Law … op. cit.*, pp. 149-189. See also Edward H.P. Brans, *Liability for Damage to Public Natural Resources* … op.cit., ch. 7 concerning international civil liability for damage to natural resources.

[343] Italian law for example appears to go further in recognizing damage to the environment *per se* and Italy is also a signatory to the 1993 Lugano Convention on 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 the 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)".

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 Andrea Bianchi, "Harm to the Environment in Italian Practice: The Interaction of International Law and Domestic Law", in Peter Wetterstein, *Harm to the Environment … op. cit.*, pp. 103 at 113-129. See also Maria Clara Maffei "The Compensation for Ecological Damage in the 'Patmos' case", in Francesco Francioni and Tullio Scovazzi, *International Responsibility for Environmental Harm* (London/Dordrecht/ Boston: Graham & Trotman 1991).

[344] See Peter Wetterstein, "A Proprietary or Possessory Interest: A *Conditio Sine Qua Non* for Claiming Damages for environmental Impairment?", *op. cit.*, 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 Lucas Bergkamp, *Liability and Environment: Private and Public Law Aspects of Civil Liability for Environmental Harm in an International Context* (The Hague: Kluwer Law International, 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". Rudiger Wolfrum, Christine Langenfeld and Petra Minnerop, *op. cit.*, p. 503. The European Directive 2004/35 covers environmental damage in article 2.

as a result of impairment of the environment, taking into account savings and costs.[345] In the case of the Kiev Protocol such interest should be a "legally protected interest". Examples also exist at the domestic level.[346]

(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 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

[345] See Article I (1) (k) of the 1997 Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage, defines nuclear damage as including … each of the following 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 subparagraph (ii); see also article 1 of the 1997 Convention on Supplementary Compensation for Nuclear Damage, which covers each of the following 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 subparagraph (ii); Article I (vii) of the 2004 Protocol to amend the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy defines nuclear damage as including 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 above; … See also for example, the Lugano Convention (article 2, para. (7) (d)); the 1991 ECE Convention on the Transboundary Effects of Industrial Accidents (article 1 (c)); the 1992 ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (article 1 (2)); the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) (article 8 (2) (a), (b) and (d)); the Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD) (article 9 (c) and (d)).

[346] Subsection 2702 (b) of the United States Oil Pollution Act 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 … natural resources". The Environmental Damage Compensation Act of Finland covers pure economic loss, except where such losses are insignificant. Chapter 32 of the Environmental Code of Sweden also provides for pure economic loss. Pure economic loss not caused by criminal behaviour is compensable only to the extent that it is significant. The Compensation for Environmental Damage Act of Denmark covers economic loss and reasonable costs for preventive measures or for the restoration of the environment. See generally, Peter Wetterstein, "Environmental Damage in the Legal Systems of the Nordic Countries and Germany", in Michael Bowman and Alan Boyle, *Environmental Damage in International Law and Comparative Law … op. cit.*, pp. 222-242.

not ordinarily have standing to pursue a claim in respect of damage to such property.[347] 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.[348]

(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 shift towards a greater focus on damage to the environment *per se* rather than primarily on damage to persons and to property".[349] 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[350] and domestic law[351] has tended to acknowledge the importance of such

---

[347] In Burgess v. M/V Tamano, 370 F.Supp (1973) 247 at 247, the court noted that: "It 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' …".

[348] Under the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C.A., sections 9601 et seq.; Clean Water Act of 1977, 33 U.S.C.A., section 1321; Oil Pollution Act of 1990, 33 U.S.C.A., 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".

[349] Louise de la Fayette, "The Concept of Environmental Damage in International Law", … *op. cit.*, pp. 149-190, at pp. 166-167.

[350] See for example the 1997 Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage, article I, paragraph 1 (k) (iv): "the costs of measures of reinstatement of impaired environment, unless such impairment is insignificant, if such measures are actually taken or to be taken, and insofar as not included in sub-paragraph (ii)"; the 2004 Paris Convention on Third Party Liability (article I (vii) (4)): "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, para. 6 of the 1992 International Convention on Civil Liability for Oil Pollution Damage refers to impairment of the environment other than loss of profit from such impairment shall be limited to costs of reinstatement actually undertaken or to be undertaken. See also article 2 (2) (c) (iv) and (d) of the Basel Protocol, article 2 (7) (c) and (8) of the Lugano Convention and article 2 (2) (d) (iv) and (g) of the Kiev Protocol.

[351] 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*. See section 16 of the Environmental Liability Act and section 32 of the Genetic Engineering Act provides that in the event of impairment of a natural complex, section 251 (2) of the 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 Environmental Liability Law in Germany (Grote/Renke) in Rudiger Wolfrum, Christine Langenfeld and Petra Minnerop, *Environmental Liability in International Law … op. cit.,* pp. 223-303, p. 278.

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.[352]

(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 *Commonwealth of Puerto Rico v. Zoe Colocotroni*, the United States Court of Appeals, First Circuit, 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 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."[353]

(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.[354] Such measures include any reasonable measures taken

---

[352] It may be noted that in the context of the work of the United Nations Compensation Commission a recent decision sanctioned compensation in respect of three projects: for loss of rangeland and habitats, Jordan got $160 million; for shoreline preserves, Kuwait got $8 million; and Saudi Arabia got $46 million by way of replacing ecological services that were irreversibly lost in the wake of the 1991 Gulf War: see Panel Report F4/5, S/AC.26/2005/10. Technical Annexes I-III, see also Peter H. Sand, "Compensation for Environmental Damage from the 1991 Gulf War", *Environmental Policy and Law*, vol. 35/6 (2005), pp. 244-249, at p. 247.

[353] 628 F.2 d, p. 652 (1st Cir. 1980), cited in Colin de la Rue, "Environmental Damage Assessment" in Ralph P. Kroner (ed.) *Transnational Environmental Liability and Insurance* (Graham and Trotman and International Bar Association, 1993), p. 71.

[354] See for example the 1997 Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage, article I, paragraph 1 (k) (vi): "the costs of preventive measures, and further loss or damage caused by such measures; the annex to the 1997 Convention on Supplementary Compensation for Nuclear Damage, article 1 (vi): the costs of preventive measures, and further loss or damage caused by such measures"; the 2004 Protocol to amend the Convention on Third Party Liability in the Field of Nuclear Energy of 1960, article I (vii) (6): "the costs of preventive measures, and further loss or damage caused by such measures, in the case of

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 measures of response 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, even though it is admitted that such damage is difficult to quantify.[355] 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 F-4 category of environmental and public health claims, the F-4 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.[356]

(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

---

sub-paragraphs 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". Article 1, para. 6 of the 1992 International Convention on Civil Liability for Oil Pollution Damage, refers to costs of preventive measures and further loss or damage caused by preventive measures. See also article 2 (2) (c) (v) and (d) of the Basel Protocol; article 2 (7) (d) and (9) of the Lugano Convention and article 2 (2) (d) (v) and (h) of the Kiev Protocol. Article 2 (f) of Annex VI of 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, minimize 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.

[355] See *Official Records of the General Assembly, Fifth-sixth Session, Supplement No. 10* (A/56/10), article 36, commentary, para. (15): "… environmental 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".

[356] Report and Recommendations made by the Panel of Commissioners concerning the fifth Instalment of "F4" Claims, document S/AC.26/2005/10. See also Peter H. Sand, "Compensation for Environmental Damage …", *op. cit.*, p. 247. Elaborated in five instalment reports the awards recommended by F4 Panel and approved without change by the Governing Council add up to $5.26 billion, "the largest in the history of international environmental law", *ibid.*, p. 245. See also the guidelines for the follow-up Programs for Environmental Awards of UNCC, *Environmental Policy and Law*, vol. 35/6 (2005), pp. 276-281.

definition. It is however considered useful 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.[357]

(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 encompassing non-service values such as aesthetic aspects of the landscape also.[358] 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.[359]

(21) Moreover, the Commission in taking such a holistic approach is, in the words of the International Court of Justice in the *Case concerning the Gabcikovo-Nagymaros Project*:[360]

> 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.[361]

---

[357] See also European Communities Green Paper on remedying Environmental damage, COM (93) 47 final, 14 May 1993, p. 10.

[358] For a philosophical analysis underpinning a regimes for damage to biodiversity, see Michel Bowman, "Biodiversity, Intrinsic Value and the Definition and valuation of Environmental Harm" in Michael Bowman and Alan Boyle, *Environmental Damage … op. cit.*, pp. 41-61. Article 2 of the 1972 Convention concerning the Protection of 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".

[359] For a concise discussion of the differing approaches on the definition of environmental damage, see Philippe Sands, *Principles of Environmental Law* (Cambridge: CUP, 2003), second edition, pp. 876-878.

[360] *Case concerning the Gabcikovo-Nagymaros Project* (*Hungary v. Slovakia*), *I.C.J. Reports 1997*, p. 7.

[361] *Ibid.*, paras. 141-142. 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.

(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,[362] while the reference to "the characteristic aspects of the landscape" denotes an acknowledgement of a broader concept of environment.[363] The 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.[364] Other terms are also used for the purpose of the present principles. They include,

---

[362] Under article 2 of the Convention on Biological Diversity, "ecosystem means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit". Under CRAMRA:

> "Damage 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."

[363] Article 2 (10) of the Lugano Convention 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 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) human beings, flora and fauna; (ii) soil, water, air and landscape; (iii) the interaction between the factors in (i) and (ii); material assets and cultural heritage, including historical monuments"; article 1 (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".

[364] *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), commentary to draft article 1, paras. (7)-(10).

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 1997 Vienna Convention on Supplementary Compensation for Nuclear Damage envisages such a system.[365]

(29) Paragraph (f) defines "victim". The definition includes natural and legal persons, and includes the State as custodian of public property.[366] 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.[367] 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 commune could also be a victim. In the *Matter of the people of Enewetek* before the Marshall Islands Nuclear Claims Tribunal established under the 1987 Marshall Islands Nuclear Claims Tribunal Act, the Tribunal 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; 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.[368] In the *Amoco Cadiz* litigation, following the Amoco Cadiz supertanker disaster off Brittany, French Administrative departments of Côtes du Nord and Finistère and numerous municipalities called "communes", and various French individuals, businesses and associations

---

[365] ILM vol. 36 (1997) 1473.

[366] 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 "some form of public trusteeships are incorporated in most legal systems" including the United Kingdom and India, see Roda Mushkat, *International Environmental Law and Asian Values: Legal Norms and Cultural Influences* (UBC Press, 2004), p. 18. See also Jona 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 India, Pakistan and Bangladesh.

[367] 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.

[368] ILM vol. 39 (2000) 1214. In December 1947 the people were removed from Enewetak Atoll to Ujelang Atoll. At the time of removal, the acreage of the Atoll was 1,919.49 acres. On 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.

sued the owner of the Amoco Cadiz, and its parent company in the United States. The claims involved lost business. The French Government itself laid claims for recovery of pollution damages and clean-up costs.[369]

(30) The definition of victim is thus linked to the question of standing. Some liability regimes such as the Lugano Convention and the EU Directive 2004/35/CE on environmental liability provide standing for non-governmental organizations.[370] The 1998 Aarhus 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.[371] Victims may also be those designated under national laws to act as public trustees to safeguard those resources and hence 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 (CERCLA 1980), 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 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

---

[369] See: *In the matter of the Oil Spill by the Amoco Cadiz off the coast of France on 16 March 1978*, United States Court of Appeals for the Seventh Circuit. 954 F.2d 1279. See also Maria Clara Maffei "The Compensation for Ecological Damage in the 'Patmos' case", … *op. cit.*, p. 381.

[370] See article 18 of the Lugano Convention and article 12 of the EU Directive 2004/35/CE.

[371] For the text see ILM vol. 38 (1999), 517.

[372] Peter Wetterstein, "A Proprietary or Possessory Interest: ... *op. cit.*, pp. 50-51.

or groups of individuals under its well-developed public interest litigation (PIL) 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. The term however is employed in domestic law[374] and in treaty practice. In case of the latter, the nuclear damage regimes impose liability on the operator.[375] The definition of operator would however vary depending upon the nature of the activity. Channelling of liability on to 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

[373] Law Commission of India, One Hundred and Eighty-Sixth Report on Proposal to Constitute Environmental Courts, September 2003, p. 31, available at http://lawcommissionofindia.nic.in/reports. Articles 32 and 226 of the Constitution of India 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 Jona Razzaque, *Public Interest Environmental … op. cit.*, pp. 314-315, 429, 443 where the author referred to arguments that the liberal standing provided before the Indian, Pakistan and Bangladesh courts to bring environmental causes of action have led to the immobility and inefficiency in administration as well as lead to 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 environment.

[374] For domestic law see for example the 1990 Oil Pollution Act (OPA) of the United States, in which the following individuals may be held liable: (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 CERCLA (42 U.S.C.A. Section 9601 (2) (A)).

[375] 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy and the 2004 Protocol to amend the Convention on Third Party Liability in the Field of Nuclear Energy of the 1960 Convention (*operator of a nuclear installation*) (article 1, para. 2) and operator in respect to a nuclear installation refers to the person designated by the competent public authority as the operator of the installation (article 1 (vi)); the 1963 Vienna Convention on Civil Liability for Nuclear Damage (operator) (article IV); 1997 Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage (“operator”) (article 1 (c)); the 1962 Convention on the Liability of Operators of Nuclear Ships (*operator of nuclear ships*) (article II).

Liability for Pollution Damage, the possibility existed to impose the liability on the shipowner or the cargo owner or both.[376] However under a compromise agreed, 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 is generally in conformity with notions obtaining at civil law.[378] More generally, while no basic definition of the 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

[376] See LEG/CONF/C.2/SR.2-13, cited in David W. Abecassis and Richard L. Jarashow, *Oil Pollution from Ships* (London: Steven and Sons: 1985) 2nd ed., p. 253. Some regimes that attach liability to the ship owner are the 1992 International Convention on Civil Liability for Pollution Damage (Article III, para. 1); the 2001 International Convention on Civil Liability for Bunker Oil Pollution Damage (article III); the 1996 International Convention for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (article 7, para. 1).

[377] Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels defines "carrier" with respect to inland navigation vessel as "the person who at the time of the incident controls the use of the vehicle on board which the dangerous goods are carried" (article 1, para. 8); the Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources defines 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 (article 1, para. 2); and under the EU Directive 2004/35/CE on environmental liability, which attaches liability on the *operator*, the term operator includes any natural or legal, private or public person who operates or controls the occupational activity.

[378] See Elspeth Reid, "Liability for Dangerous Activities: A Comparative Analysis", ICLQ, vol. 48 (1999), pp. 731-756, p. 755.

[379] See Marie-Louise Larsson, *The Law of Environmental Damage: Liability and Reparation* (The Hague: Kluwer Law International, 1999), p. 401.

[380] 1952 Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface, article 12.

[381] See Article 2 (c) of the annex VI on Liability Arising from Environmental Emergencies concluded in June 2005 which states that "'operator' means any natural and juridical person, whether governmental or non-governmental, which organizes activities to be carried out in the Antarctic Treaty area. An operator does not include a natural person who is an employee, contractor or subcontractor, or agent of, or who is in the service of, a natural or juridical person, whether governmental or non-governmental, which organizes 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." For the text, see www.aad.gov.au.

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.

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.

---

[382] The definition of ship owner in the Bunker Oil Convention is broad. It includes the registered owner, bareboat charterer, manager and operator of the ship (article 1, para. 2).

[383] EU Directive on Environmental Liability, article 1, para. 6.

[384] Under article 8 of the CRAMRA, the primary liability lies with the *operator*, which is defined 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 aforementioned Article 1 (11). 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, clause 16.

(2) The purpose of ensuring protection to victims suffering damage from transboundary harm has been an essential element from the inception 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, insofar as possible, measures of reparation" and that: " … an innocent victim should not be left to bear loss or injury; ... ".[385] The former consideration is already addressed by the draft articles on prevention.

(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[386] and the *Corfu Channel* case,[387] 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 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 and control do not cause damage to the environment or other areas beyond the limits of national jurisdiction.

(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), p. 51, document A/CN.4/360*, para. 53, section 3 (paras. 2 and 3).

[386] *Trail Smelter Arbitration*, UNRIAA, vol. III, p. 1905 at p. 1965 stated:

> "[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."

[387] *Corfu Channel case* (Merits) *I.C.J. Reports 1949*, p. 4 at p. 22: 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".

"States shall cooperate 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."[388]

(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."

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.[389]

(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

---

[388] *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).

[389] Birnie and Boyle, *International Law ... op. cit.* at p. 105 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".

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.[390]

(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[391] is gradually disappearing.[392] In the case of damage to natural resources or the environment there is a right of

---

[390] For analysis of the definition of environment and the compensable elements of damage to environment see Barboza, Eleventh Report on International liability, document A/CN.4/468, pp. 1-17, at para. 28, p. 12. 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, *Recueil des Cours* … vol. 293 (2001) pp. 225-233.

[391] For contrasting results see *Blue Circle Industries Plc v. Ministry of Defence*, [1998] 3 All ER and, *Merlin v. British Nuclear Fuels, Plc*, [1990] 3 All ER 711.

[392] For difficulties involved in claims concerning ecological damage and prospects, see the *Patmos* and the *Haven cases*, see generally, Andrea Bianchi, "Harm to the Environment in Italian Practice: The Interaction of International Law and Domestic Law, … " op cit., p. 103 at 113-129. See also Maria Clara Maffei "The Compensation for Ecological Damage in the 'Patmos' case", … *op. cit.*, p. 381 at 383-390; and David Ong, "The Relationship between Environmental Damage and Pollution: Marine Oil Pollution Laws in Malaysia and Singapore", in Bowman and Boyle, *Environmental Damage … op. cit.*, p. 191 at 201-204. See also Sands, "*Principles … " op. cit.*, ... pp. 918-922. See also the 1979 *Antonio Gramsci* incident and the 1987 *Antonio Gramsci* incident happened on 6 February 1987, see generally, Wu Chao, *Pollution from the Carriage of Oil by Sea*: *Liability and Compensation* (The Hague: Kluwer Law International, 1996), pp. 365-366: The IOPC Fund resolution number 3 of 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*". In the *Amoco Cadiz*, 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. It 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". Maria Clara Maffei "The Compensation for Ecological Damage in the 'Patmos' case", Francioni and Scovazzi, *International Responsibility … " op. cit.*, p. 381 at 393. Concerning lost image, the Court observed that the plaintiffs claim is compensable in measurable damage, to the extent that it can 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 therefore", ibid., at 394. See also in the Matter of the People of Enewetek ILM vol. 39 (2000), p. 1214 at 1219, 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: $22.5 m for soil removal; $15.5 m for potassium treatment; $31.5 m for soil disposal (causeway); $10 m for clean-up of plutonium; $4.51 m for surveys; and $17.7 m for soil rehabilitation and revegetation.

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.[393]

(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 US Comprehensive Environmental Response, Compensation and Liability Act, 1980 (CERCLA or Superfund). The Statute establishes the Superfund with tax dollars to be replenished by the costs recovered from liable parties, to pay for clean-ups 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.[394]

(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; (d) and 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.[395]

(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

---

393 See general commentary to draft Principle 2.

394 For an analysis of CERCLA, see Brighton and Askman, “The Role of the Government Trustees in Recovering Compensation for Injury to Natural Resources”, in Peter Wetterstein (ed.), *Harm to the Environment … op. cit.*, pp. 177-206, 183-184.

395 See also Lucas Bergkamp, *Liability and Environment*: ... *op. cit.*, 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.

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 its own variations in its implementation.

(12) In one sense, it seeks to provide an incentive on the operator and other relevant persons or entities to prevent a hazardous activity from causing transboundary damage. The "polluter-pays" 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."

(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 Lugano Convention 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 2003 Kiev Protocol, in its preamble, refers to the "polluter-pays principle" as "a general principle of international environmental law, accepted also by the parties to" the 1992 Protection and Use of Watercourses Convention and Lakes and the 1992 Industrial Accidents Convention.[396] National jurisdictions have also placed reliance on it as playing a remedial and compensatory function.[397]

---

[396] It also finds reference, for example, in the 1990 International Convention on Oil Pollution Preparedness and Response (ILM vol. 30 (1990) p. 735); the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention); (ILM vol. 32 (1993), p.1069); the 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area; the 1992 Convention on the Protection of the Marine Environment of the Black Sea against Pollution (ILM vol. 32 (1993) p. 1110); the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes; the 1992 Convention on the Transboundary Effects of Industrial Accidents and the 1993 Lugano Convention, and the EU Directive 2004/35/CE on environmental liability.

[397] 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.

(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."[398]

However, the polluter-pays principle has been endorsed or is being endorsed in different national jurisdictions. The Indian Supreme Court in the *Vellore Citizens' Welfare Forum v. Union of India*, 1996 (5) SCC 647, noted that precautionary principle, and 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". Report of the Indian Law Commission, see Law Commission of India, One Hundred Eighty-Sixth Report on Proposal to Constitute Environment Courts, September 2003. Access to justice, particularly in environmental matters is an essential facet of article 21 of the Indian Constitution. New Zealand and Australia already have environmental courts. Available at: http://lawcommissionofindia.nic.in/reports>, p. 36. Multiple provincial statutes of Canada regarding liability for environmental damage and subsequent remediation recognize the principle. In Spain, the Spanish 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 endorsed in various forms the polluter-pays principle. In *Epoux Vullion v. Société Immobilière Vernet-Chritophe*, JCP 1971.2.16781, 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 neighborhood". The Swedish Environmental Code, 1998, which came into force on 1 January 1999 makes the party who is liable, to a reasonable extent, for pollution to pay 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, (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 or those that harm or have a risk of causing harm to the environment. Intent need not be proved. Under the National Environmental Management Act, 1998, of South Africa strict liability is imposed on operators who may cause or 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 Secretariat Survey of Liability regimes, A/CN.4/543, paras. 272-286.

[398] Birnie and Boyle, *International Law … op. cit.*, pp. 93-94.

(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".[399] 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".[400] Some commentators doubt "whether it (the 'polluter-pays' principle) has achieved the status of generally applicable rule of customary international law, except perhaps in relation to States in the EC, the UNECE, and the OECD".[401]

(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 of determining *a priori* how reparation is to be made for injury caused by wrongful acts

---

[399] *Ibid*., pp. 94-95. See also Secretariat Survey of Liability regimes, A/CN.4/543, chapter II.

[400] Birnie and Boyle, *International law … op. cit.*, p. 95. The authors noted that reference to "public interest" in Principle 16 of the Rio Declaration leaves "ample room", for exceptions and as adopted at Rio the principle "is neither absolute nor obligatory" p. 93. They also noted that in the case of the East European nuclear installations, the Western European Governments, who represent a large group of potential victims, have funded the work needed to improve the safety standards, p. 94.

[401] Philippe Sands, *Principles … op. cit.*, p. 282. For illustration of the flexible way in which this principle is applied in the context of OECD and EC, pp. 281-285. Rudiger Wolfrum, notes that "Although 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 the light of the United States' practice and also in the light of the uncertainties about its scope and consequences", see Rudiger Wolfrum "Transboundary Pollution" in Fred L. Morrison and Rudiger Wolfrum (eds.) *International, Regional, and National Environmental Law … op. cit.* See generally Nicolas de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules* (Oxford: OUP, 2002), pp. 21-59.

In the arbitration between France and the Netherlands, concerning the application of the Convention of 3 December 1976 on the Protection of the Rhine against Pollution and the Additional Protocol of 25 September 1991 against Pollution from Chlorides (France/Netherlands), 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 award dated 12 March 2004 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. Affaire concernant l'apurement des comptes entre le Royaume des Pays-Bas et la République Française en application du Protocole du 25 Septembre 1991 Additionel à la Convention relative à la Protection du Rhin contre la pollution par les chrorures du 3 December 1976. The Tribunal, stated, in pertinent part in para. 102-103:

> "102 … Le tribunal note que les Pays-Bas, à l'appui de leur demande ont fait référence au principe du 'polluer payeur'."
>
> 103. Le Tribunal observe que ce principe figure dans certains instruments internationaux, tant bilatéraux que multilatéraux, et se situe à des niveaux d'effectivité variables. Sans nier son importance en droit conventionnel, le Tribunal ne pense pas que ce principe fasse partie du droit international général."
>
> Arbitral Award of 12 March 2004, available at http://www.pca-cpa.org.

or omissions".[402] 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 articles on responsibility of States for internationally wrongful acts.[403] The content of this obligation was detailed by the Permanent International Court of Justice in the *Chorzow 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, so far as possible, wipe out all the consequences of the illegal act and re-establish 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 the amount of compensation due for an act contrary to international law."[404]

(17) The *Chorzow Factory* standard applies in respect of internationally wrongful acts, which are not covered by the present draft principles. It is however useful 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

---

[402] Garcia-Amador, Sohn and Baxter (eds.), *Recent Codification of the Law of State Responsibility for Injury to Aliens* (Dobbs Ferry, NY), 1974, 89. See also Alan Boyle, "Reparation for Environmental Damage in International Law: Some Preliminary Problems", in Bowman and Boyle, *Environmental Damage … op. cit.*, pp. 17-26. Julio Barboza, Special Rapporteur, Eleventh report, document A/CN.4/468 (1995).

[403] *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), article 31 and its commentary.

[404] *Chorzow Factory, Jurisdiction, P.C.I.J., 1927*, Series A, No. 9, p. 21.

damages awarded should not have a punitive function.[405] The second is that the victim can only be compensated for the loss suffered but cannot expect to financially gain from the harm caused.[406] While keeping in view these two basic principles, the point can still be made that equity, as well as 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.[407]

(18) Some general principles concerning payment of compensation have evolved over a period of time and were endorsed by the International Court of Justice and other international tribunals. These may be briefly noted:[408] (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:[409] 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;

---

[405] See B. Graefrath, "Responsibility and Damage Caused: Relationship Between Responsibility and Damages", *Recueil des Cours ...* 1984-II, vol. 185 (1985), pp. 9-150, pp. 100-102. *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), Responsibility of States for internationally wrongful acts adopted by the Commission in 2001, article 36 and its commentary.

[406] For the principles stated in the "*Lusitania*" case and the *Factory at Chorzow case* on the function of compensation, see, *ibid*., article 36 and its commentary.

[407] The Supreme Court of India in the *M.C. Mehta v. Union of India* (the Oleum gas leak case) (1987 SC 1086) stressed the point that the "larger and more prosperous the enterprise, greater must be the amount of compensation payable for the harm caused on account of an accident in the carrying on of the hazardous or inherently dangerous activity by the enterprise". 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.

[408] *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), article 36, its commentary and the cases cited therein.

[409] *Ibid.*, and the cases cited therein.

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 the intrusion on the person, home or private life".[410]

(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", "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.[411]

(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, as for example, 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 get compensation. The Commentary to draft Principle 2 reveals the extent to which some of these problems have been overcome.

---

[410] *Ibid*., para. (16). See also Vinod Shankar Misra, "Emerging Right to Compensation in Indian Environmental Law", *Delhi Law Review*, vol. 23 (2001), pp. 58-79.

[411] R. Doak Bishop, James Crawford, W. Michael Reisman, *Foreign Investment Disputes: Cases, Materials, and Commentary* (The Hague: Kluwer Law International, 2005), chap. VII on methods for valuing losses, pp. 1331-1372. Also see, C.F. Amerasinghe, "Issues of Compensation for the Taking of an Alien Property in the light of recent Cases and Practice", ICLQ, vol. 41 (1992), pp. 22-65.

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 "Each State" in the present context is to the State 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 the obligations concerning prevention of

transboundary 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, that is, of ensuring prompt and adequate compensation. This is highlighted without prejudice to any *ex gratia* payments to be made or contingency and relief measures, 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 Stockholm Declaration of 1972 and Principle 13 of the Rio Declaration of 1992.[412]

(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, 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 extensive national law and practice

[412] See also the 2000 *Malmö* Declaration and the 2001 Montevideo Programme III approved and adopted by decision 21/23 of the 21st session of the UNEP Governing Council and the Plan of Implementation of the World Summit on Sustainable Development, A/CONF.199/20, resolution 2 of 2 September 2002, annex.

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.[413]

(7) The standard of promptness and adequacy in paragraph 1 is a standard that also finds support in the *Trail Smelter* Arbitration.[414] 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.[415] To render access to justice more

---

[413] For a mention of different sources as a basis for arriving at this conclusion, see Peter-Tobias Stoll, "Transboundary Pollution" in Fred L. Morrison and Rudiger Wolfrum (eds.) *International, Regional, and National Environmental Law ... op. cit.*, pp. 169-200, pp. 169-174. Peter-Tobias 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."

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 Johan G. Lammers, "Transfrontier Pollution and International Law, The Present State of Research" in The Hague Academy of International Law, Center For Studies and Research in International Law and International Relations, *Transfrontier Pollution and International Law* (1986), p. 100.

[414] See Principle 10 of the Rio Declaration, and article 235 (2) of the 1982 United Nations Convention on the Law of the Sea, in article 2 (1) of the 1996 Helsinki articles on international watercourses, prepared by the International Law Association and in human rights law precedents. See also Alan E. Boyle, "Globalizing Environmental Liability: the Interplay of National and International Law", *Journal of Environmental Law*, vol. 17 (2005), pp. 3-26, p. 18.

[415] Emmanuel Fontaine, "The French Experience: 'Tanio' and 'Amoco Cadiz' incidents compared" in Colin M. De La Rue, *Liability for Damage to the Environment* (London: Lloyds of London Press, 1993), pp. 101-108, p. 105. Similarly, in the case of Bhopal gas tragedy, it is 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 continued in India for more than five years without even reaching the commencement of pretrial discovery, see Kenneth F. McCallion and H. Rajan Sharama, "International Resolution of Environmental Disputes and Bhopal Catastrophe" in The International Bureau of the Permanent Court of Arbitration (eds.) *International Investments and Protection of the Environment* (The Hague: Kluwer Law International, 2001), pp. 239-270, p. 249. It is also stated that *Trail Smelter* Arbitration took about 14 years to adjudicate upon the claims of private parties. See Philip McNamara, *The Availability of Civil Remedies to Protect Persons and Property from Transfrontier Pollution Injury* (Alfred Metzener Verlag, Frankfurt, 1981), p. 70.

widespread, efficient and prompt, suggestions have been made to establish special national or international environmental courts.[416]

(8) On the other hand, the notion of "adequacy" of compensation refers to any number of issues.[417] 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 an 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 of the law 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 term "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.[418]

(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 and it is based on the factual determination as to who has the use, control, and direction of the object at the relevant

[416] A. Rest "Need for an International Court for Environment? Underdeveloped Legal Protection for the Individual in Transnational Litigation", Environmental Policy and Law, vol. 24, (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 Ellen Hey, "Reflections in an International Environmental Court" in The International Bureau of the Permanent Court of Arbitration (eds.), *International Investments ... op. cit.*, pp. 271-301, at p. 299-300. At the national level, the Indian Law Commission, made a very persuasive case for the establishment of national environmental courts in India. See Law Commission of India, *op. cit.* New Zealand and Australia already have environmental courts. Available at: http://lawcommissionofindia.nic.in/reports>.

[417] For an exhaustive enumeration of the implementation of the principle of prompt, adequate and effective compensation in practice, see Rene Lefeber, *Transboundary Environmental Interference …, op. cit.*, ch. 7, pp. 229-312.

[418] *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10* (A/56/10), article 1 and commentary paras. (7)-(12).

time. It is worth stressing that liability in case of significant damage is generally channelled[419] 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 International Convention on Civil Liability for Oil Pollution Damage (CLC) 1992. In other cases, liability is channelled through more than one entity. Under the Basel Protocol, 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 has 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.[420] The imposition of the primary liability on the operator is widely accepted in international treaty regimes and in national law and practice.[421]

(12) The second sentence of the 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", "presumed responsibility", "fault *per se*", "objective liability" (*responsabilité objective*) or risk liability (*responsabilité pour risqué crée*).[422] The phrase "such liability should not require proof of fault" seeks to capture such a broad spectrum of designations.

[419] According to Goldie, the nuclear liability conventions initiated the new trend of channelling liability back to operator "no matter how long the chain of causation, nor how novel the intervening factors (other than a very limited number of exculpatory ones)". See 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. XVI (1985) pp. 174-248 at p. 196. See also Goldie, "Liability for Damage and the Progressive Development of International Law", ICLQ vol. 14 (1965), p. 1189, pp. 1215-8.

[420] For an interesting account on economic, political and strategic factors influencing the choices made in channelling liability, see Gunther Doeker and Thomas Gehring "Private or International Liability for Transnational Environmental Damage - The Precedent of Conventional Liability Regimes", *Journal of Environmental Law*, vol. 2 (1990), pp. 1-15, p. 7.

[421] See Secretariat Survey of Liability regimes, A/CN.4/543, paras. 340-386.

[422] See Ferdinard F. Stone, "Liability for damage caused by things", in Andree Tunc (ed.), International Encyclopedia of Comparative Law, Vol. XI, Torts, part I (The Hague, Nijhoff, 1983), chap. 5, p. 3, para. 1.

(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 a secret. Strict liability is recognized in many jurisdictions, when assigning liability for inherently dangerous or hazardous activities.[423] The case for strict liability for ultrahazardous or abnormally dangerous activities was held to be the most proper 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 technical evidence,[424] 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.[425]

(14) In the case of damage arising from hazardous activities, it is fair to designate strict liability of the operator at the international level.[426] 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 Kiev Protocol, article 4 of the Basel Protocol; and article 8 of the Lugano Convention.

(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.

---

[423] See the Secretariat Survey of Liability regimes, A/CN.4/543, paras. 29-260. The Indian Supreme Court in *M. C. Mehta v. Union of India*, AIR 1987 SC 1086 (the *Oleum Gas Leak* case) 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. See the Report of the Indian Law Commission, *op. cit.*

[424] See Elspeth Reid, "Liability for Dangerous activities ... , *op. cit.*, p. 756. See also the Secretariat Survey of Liability regimes, A/CN.4/543, para. 23.

[425] Secretariat Survey of liability regimes, *ibid*.

[426] There was hesitation exhibited by the Working Group of the Commission 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". Brackets added. *Yearbook … 1996*, vol. II (Part Two), Annex I, paragraph (1) of the general commentary to chapter III. In arriving at this conclusion the Working Group had the benefit of the Survey of liability prepared by the Secretariat, *Yearbook* … 1995, vol. II (Part One), document A/CN.4/471.

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 at the same time 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.[427]

(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 ingredients should be carefully defined, keeping however 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

[427] See Peter Wetterstein, "A Proprietary or Possessory Interest …" *op. cit.*, pp. 29-53, at p. 40.

positive elements of the concept of strict liability as they are obtained in different jurisdictions. Such an approach would not only make the international standard widely acceptable but 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.[428] 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 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 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 <u>third sentence of paragraph 2</u> 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 cover for the activity. Further, if liability has to be strict, that is, if liability has to be established

---

[428] See the observations of Elspeth Reid, "Liability for Dangerous activities ... " *op. cit.*, pp. 741-743.

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.[429]

(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 Kiev Protocol and article 12 of the Basel Protocol provide for strict but limited liability. In contrast, article 6 (1) and article 7 (1) of the Lugano Convention provides for strict liability without any provision for limiting the liability. Where limits are imposed on 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 International Convention on Civil Liability for Oil Pollution Damage (CLC) 1992, the shipowner's maximum limit of liability is 59.7 million Special Drawing Rights; thereafter the International Oil Pollution Compensation Fund 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, a

[429] See Robin 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.

200 million SDRs.[430] Similarly, the 1997 Vienna Convention on Civil Liability for Nuclear Damage also prescribed appropriate limits for operator's liability.[431]

(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 and article 5 of the Kiev Protocol. 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.[432] Existing international instruments also provide for that kind of liability.[433]

---

[430] Article V (1) of the 1992 Protocol and article 4 of the Fund Convention. Following the sinking of the Erika off the French coast in December1999, the maximum limit was raised to 89.77 million SDRs, effective 1 November 2003. Under 2000 amendments to the 1992 Fund Protocol to enter into force in November 2003, the amounts have been raised from 135 million SDR to 203 million SDR. If three States contributing to the Fund receive in their territories combined quantities of equal to or more than 600 million tons of oil in the preceding year, the maximum amount is raised to 300,740,000 SDR, from 200 million SDR.

[431] For the text, ILM vol. 36 (1997) 1473. 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 1997 Convention on Supplementary Compensation provides an additional sum, which may exceed $1 billion. See Articles III and IV. For the text, ILM vol. 33 (1994) p. 1518.

[432] On joint and several liability, Lucas Bergkamp, *Liability and Environment*: … *op. cit.*, pp. 298-306.

[433] For examples of treaty practice, see for example article IV of the 1969 International Convention on Civil Liability for Pollution Damage; article IV of the 1992 International Convention on Civil Liability for Pollution Damage; article 8 of the 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea; article 5 of the International Convention on Civil Liability for Bunker Oil Pollution Damage; article 4 of the Basel Protocol; article 4 of the Kiev Protocol; article 11

(26) If however, the person who has suffered damage has by his or her own fault caused the damage or 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 Lugano Convention, article 3 of the Basel Convention or article 4 of the Kiev Protocol. Liability is excepted if, despite taking all appropriate measures, the damage was the result of (a) an act of armed conflict, hostilities, civil war or insurrection; or (b) the result of a natural phenomenon of exceptional, inevitable, unforeseeable and irresistible character; or (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.[434]

---

of the Lugano Convention. See also article VII of the 1962 Convention on the Liability of Operators of Nuclear Ships; article II of the 1997 Protocol to the 1963 Vienna Convention on Civil Liability for Nuclear Damage; article II of the 1963 Vienna Convention on Civil Liability for Nuclear Damage; article 3 of the 1960 Convention on Third Party Liability in the Field of Nuclear Energy; article 3 of the 2004 Protocol to amend the 1960 Convention on Third Party Liability in the Field of Nuclear Energy.

[434] Under paragraphs 2 and 3 of article III of the 1992 International Convention on Civil Liability for Oil Pollution Damage *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 1969 International Convention on Civil Liability for Oil Pollution Damage; article 3 of the 2001 International Convention on Civil Liability for Bunker Oil Pollution Damage; article 7 of the 1996 International Convention on Liability and Compensation for Damage in connection with the Carriage of Hazardous and Noxious Substances by Sea; article 3 of the 1977 Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources provides similar language in respect of the *operator of an installation*; article 3 of the 1989 Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels.

Exemptions are also referred to in article IV (3) of the 1997 Protocol to amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage: no liability under this Convention shall attach to an operator if he proves that the nuclear damage is directly due to an act of armed conflict, civil war, insurrection. See also article IV (3) of the 1963 Vienna Convention on Civil Liability for Nuclear Damage; article 9 of 2004 Protocol to amend the 1960 Convention on Third Party Liability in the Field of Nuclear Energy; article 3 (5) of the annex to the 1997 Convention on Supplementary Compensation for Nuclear Damage Convention; article 4 (1) of the EU Directive 2004/35 on environmental liability. The Directive also does not apply to activities whose main purpose is to serve national defence or international security. In accordance with article 4 (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 (1) of Annex VI to the Madrid Protocol to the Antarctic Treaty entitled Liability Arising from Environmental Emergencies provides: "An operator shall not be liable pursuant to Article 6 if it proves that the environmental emergencies 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 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

(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 that 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 cover 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 need 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.[435]

(30) Despite these difficulties it is encouraging that insurance cover is increasingly being made available for damage to persons or property or environment due to oil spills and other hazardous activities.[436] This is mainly because of the growing recognition on the part of the industry, the consumers, and the 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

---

potential adverse impact; (c) an act of terrorism ; or (d) an act of belligerency against the activities of the operator." For examples at domestic law, see Secretariat Survey of Liability regimes, A/CN.4/543, paras. 434-476.

[435] Hans-Dieter Sellschopp, "Multiple Tortfeasors/Combined Polluter Theories, Causality and Assumption of Proof/Statistical Proof, Technical Insurance Aspects" in Ralph P. Kroner (ed.), *Transnational Environmental Liability … op. cit.*, pp. 51-57, pp. 52-53.

[436] Charles S. Donavan and Elizabeth M. Miller, "Limited Insurability of Unlimited Liability: Serial Claims Aggregates and Alternatives: the American View" in Ralph Kroner (ed.), *Transnational Environmental Liability ibid*., pp. 129-158. Werner Pfennigstorf, "Limited Insurability of Unlimited Liability: Serial Claims Aggregates and Alternatives: The Continental View" in Ralph Kroner (ed.), *ibid*., pp. 159-165.

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.[437] However, it is inevitable that premium for insurance cover of the hazardous activities grows in direct proportion to the range and magnitude of the risk that is sought to be covered. The raise in the premium costs is also directly related to the growing trend to designate operator's liability as strict. Further, the trend to raise the limits of liability to higher and higher levels, even if the operator's liability is maintained under a cap, is also a factor in the rising costs of premiums.

(31) The State concerned may establish minimum limits for financial securities for such purpose, taking into consideration the availability of capital resources through banks or other financial agencies. Even insurance schemes may require certain minimum financial solvency from the operator to extend their cover. Under most of the liability schemes, the operator is obliged to obtain insurance and such other suitable financial securities.[438] 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.[439] An effective insurance system may also require wide participation by potentially interested States.[440]

---

[437] Anthony J. Fitzsimmons, "Non-Marine Environmental Liability: The Use of Insurance Pools and the European Dimension", in Ralph P. Kroner, *ibid*., pp. 166-179, at pp. 166-167.

[438] For treaty practice, see for example article III of the 1962 Convention on the Liability of Operators of Nuclear Ships; article VII of the 1997 Protocol to the 1963 Vienna Convention on Civil Liability for Nuclear Damage; article VII of the 1963 Vienna Convention on Civil Liability for Nuclear Damage; article 10 of the 1960 Convention on Third Party Liability in the Field of Nuclear Energy; article 10 of the 2004 Protocol to amend the 1960 Convention on Third Party Liability in the Field of Nuclear Energy. See also article V of the 1992 International Convention on Civil Liability for Pollution Damage; article 12 of the 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea; article 7 of the International Convention on Civil Liability for Bunker Oil Pollution Damage article 14 of the Basel Protocol; article 11 of the Kiev Protocol; article 12 of the Lugano Convention.

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

[440] See for example the statement by Italy, *ibid.*, A/C.6/58/SR.17, para. 28.

(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".[441] Such insurance coverage should also be available for clean-up costs.[442]

(33) Insurance coverage is available in some jurisdictions, such as the United States and in Europe. The experience gained in such markets can be quickly transferred to other markets as the insurance industry is growing in global market. Article 14 of the EU Directive 2004/35/CE on environmental liability with regard to the prevention and remedying of environmental damage 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 cover. 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 that the operator would otherwise be entitled to under the law. Article 11 (3) of the Kiev Protocol and article 14 (4) of the Basel Protocol 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. This, of course, does not preclude the assumption of these responsibilities at subordinate level of government in the case of a State with a federal system. Available schemes of allocation of loss

[441] See 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, Brussels, 23.1.2002, COM (2002) 17 final, pp. 7-9.

[442] *Ibid.*

envisage some sort of supplementary funding to meet claims of compensation in case the funds at the disposal of the operator are not adequate enough to provide compensation to 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 to 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 national budget. In other words, the State could take a share in the allocation of loss created by the damage, as it happened in the case of the nuclear energy operations. Another account could be a common pool of fund 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. But 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 thin and not connected by any common economic or strategic interest.

(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 its 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 would 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 both from 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 of the dangers the damage posed to the population, their property, and to the environment in the immediate neighbourhood. 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 had already not become one. 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 damage, its likely effects on persons, property and environment and the possible precautions that need to be taken to protect them from its ill-effects or to contain or 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.[443] The notification obligation has to be performed as soon as it 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 the obligation of due diligence both at the stage of authorization of hazardous activities[444] and in monitoring the activities in progress after authorization and extending into the phase when damage might actually materialize, in spite of best efforts to prevent the same. The International Court of Justice in the *Case concerning the Gabcikovo-Nagymoros Project*

---

[443] Phoebe N. Okowa, "Procedural Obligations in International Environmental Agreements", BYBIL vol. 67 (1996), 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 IAEA Convention on Early Notification of a Nuclear Accident, which "confirms the established position at customary law", see p. 332.

[444] Closely associated with the duty of prior authorization is the duty to conduct an environmental impact statement (EIA). See Xue Hanqin, *Transboundary Damage ... op. cit.*, at p. 166. Phoebe Okowa notes at least five types of ancillary duties associated with the obligation to conduct 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 Phoebe N. Okowa, *ibid.*, at pp. 282-285, p. 285 and on the content of EIA, *ibid.*, fn. 25, p. 282, p. 286.

noted the need for continuous monitoring of hazardous activities as result of "awareness of the vulnerability of the environment and the recognition that environmental risks have to be assessed on a continuous basis".[445]

(4) Further, the State concerned should ever be vigilant and ready to prevent the damage as far as possible and when damage indeed occurs to mitigate the effects of damage with the best available technology.[446] The role of the State envisaged under the present draft principle is thus complementary to the role assigned to it under draft articles 16 and 17 of the draft articles on prevention, which deal with requirements of "emergency preparedness" and "notification of emergency".[447]

(5) The present draft principle however should be distinguished and goes beyond those provisions. 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. It 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 sub-paragraph (e).

(6) The requirement in paragraph (b) is directly connected to the application of the precautionary approach.[448] As with the application of the precautionary approach in any

---

[445] Judgment, *I.C.J. Reports 1997*, p. 7, para. 112.

[446] *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."

[447] For the text and commentaries of articles 16 and 17 of the draft articles on prevention, see *Official Records of the General Assembly, Fifty-third Session, Supplement No. 10* (A/56/10), pp. 370-436, at 429-433. 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, Birnie and Boyle, *International Law …*, *op. cit.*, p. 137. The authors also note at p. 136 that "it is legitimate to view the *Corfu Channel* case as authority for customary obligation to give warning of known environmental hazards".

[448] On the requirement of best available technology, Rudiger Wolfrum noted that it is closely associated with the precautionary principle, see Rudiger Wolfrum "International Environmental Law: Purposes, Principles and Means of Ensuring Compliance", in Fred L. Morrison and Rudiger Wolfrum, *International, Regional and National Environmental Law* (The Hague: Kluwer Law International, 2003), p. 15. It is also suggested the term "available" means that "States are responsible for applying those technological advances that have already been marketed, as

particular field, this allows some flexibility and is expected to be performed keeping in view all social and economic costs and benefits.[449] Indeed the principle that States should ensure that activities within their jurisdiction and control do not give rise to transboundary harm cannot be overemphasized. The importance of response action once an accident or incident has occurred triggering significant damage could not equally 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 even without losing any time over 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 swing immediately into action 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 at all times the public welfare and protecting the public interest.

(8) Any measure that the State takes in responding to the emergency created by the hazardous activity does not and should not however put the role of the operator in any secondary or residuary role. The operator has a primary responsibility to maintain emergency preparedness and operationalize any such measures as soon as an incident occurs. The operator could 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.[450] Accordingly, the possibility of an

---

opposed to every new development in pollution control", see Peter-Tobias Stoll, "Transboundary Pollution", in Fred L. Morrison and Rudiger Wolfrum, pp. 169-200, p. 182.

[449] Guidelines on Precautionary Principle in the context of biodiversity conservation and natural resource management, prepared under a joint initiative of Fauna and Flora International, IUCN-the World Conservation Union, *Environmental Policy and Law*, vol. 35/6 (2005), pp. 274-275, at p. 275.

[450] States are required to notify such details in case of nuclear incidents. See article 2 of the IAEA Notification Convention. They must also give the States likely to be affected through the IAEA other necessary information to minimize the radiological consequences. Sands, *Principles ... op. cit.*, pp. 845-846.

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.[451] 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 borne out of "elementary considerations of humanity",[452] should consult the States affected or likely to be affected to determine the best possible response action to prevent or mitigate transboundary damage.[453] Consultations are usually triggered upon request. It is considered that the qualification, "as appropriate", would be 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; the degree to which they feel obliged to cooperate, as well as upon 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

[451] Under articles 5 and 6 of the EU Directive 2004/35/CE, competent authorities, to be designated under article 13, 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.

[452] See *Corfu Channel case I.C.J. Reports 1949*, p. 4, at p. 22. For reference to the particular concept as part of "obligations … based … on certain general and well-recognized principles", as distinguished from the traditional sources of international law enumerated in article 38 of the Statute of the International Court of Justice, Bruno Simma, "From Bilateralism to Community Interest in International Law", *Recueil des Cours*, … vol. 250 (1994-VI), pp. 291-292.

[453] On the duty of States to notify and consult with each other with a view to take appropriate actions to mitigate damage, and for citation of relevant legal instruments including Principle 18 of the Rio Declaration, 1992 Industrial Accidents transboundary accidents, 1992 Biodiversity Convention and the 2000 Biosafety Protocol and the treaties in the field of nuclear accidents and the IAEA 1986 Early Notification Convention, see Sands, *Principles … op. cit.*, pp. 841-847.

exposed.[454] 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 a 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.[455]

(11) Paragraph (e) is self-explanatory and is modelled on article 28 of the Convention on the Law of the Non-Navigational Uses of International Watercourses, 1997. 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; financial and other arrangements concerning local hospitality or immunities and privileges. Any such arrangements should not be based on purely commercial terms and be consistent with the elementary considerations of humanity and the importance of rendering humanitarian assistance to the victims in distress.

---

[454] In the *Gabcikovo-Nagymoros Project* case, in defense of the variant C 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 concluded between Czechoslovakia and Hungary, 1977, Slovakia argued that "It 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." The Court referring to this principle noted that "it would follow from such a principle that an injured State which has failed to take necessary measures to limit the damage sustained would not be entitled to claim compensation for that damage which could have been avoided". 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." 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. See Judgment, *I.C.J. Reports 1997*, p. 7, para. 80. 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.

[455] In general, on the criterion of reasonableness in computing costs admissible for recovery, see Peter Wetterstein, "A Proprietory or Possessory Interest …", *op. cit.*, pp. 47-50.

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.[456] The substantive minimum requirements such as channelling of liability, designating liability without proof of fault, specifying minimum conditions, limitations or exceptions for such liability, establishing arrangements for financial 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

[456] Rene 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. Rene Lefeber, *Transboundary Environmental … op. cit.*, pp. 234-236.

enforcement of foreign judicial and arbitral decisions. It 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 Stockholm 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 possible of course 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.[457]

(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

---

[457] For comment on the Convention see Stephen C. McCaffrey, *Private Remedies for Transfrontier Environmental Disturbances* (IUCN and Natural Resources, Morges, Switzerland, 1975), pp. 85-87. The main contribution of the Convention is the creation of a Special Administrative Agency to supervise the transbounday 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 however apply to pending causes. 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, though 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 Philip McNamara, *The Availability of Civil Remedies … op. cit.*, pp. 146-147.

Principle 10 of the Rio Declaration and in Principle 23 of the World Charter for Nature. It is also increasingly recognized in national constitutional law regarding protection of the environment.[458]

(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 the effectiveness of the remedies that are made available. 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 non-discriminatory principle in the determination of claims concerning hazardous activities.[459] The principle of non-discrimination 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. This principle 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.[460]

---

[458] K.W. Cuperus and A.E. Boyle, *Articles on Private Law Remedies for Transboundary Damage in International Watercourses*, International Law Association, Report of the 67th Conference, Helsinki (1986) at p. 407.

[459] 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. 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 Convention on the Law of the Non-Navigational Uses of International Watercourses.

[460] See Alexandre Kiss and Dinah Shelton, *International Environmental Law* (Ardsley, NY: Transnational Publishers, 2004), pp. 201-203; Birnie and Boyle, *International Law …*, *op. cit.*, 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 of costs from foreign plaintiffs, the denial of legal aid and the denial of jurisdiction over actions involving foreign land”, K.W. Cuperus and A.E. Boyle, *Articles on Private Law Remedies …*, *op. cit.*, pp. 406-407.

(6) The substantive aspect of the principle, on the other hand, raises more difficult issues concerning its precise content and lacks similar consensus.[461] 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 have been met. However, the problem arises if nationals themselves are not provided with the minimum substantive standards, in which case the principle 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 the 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,[462] particularly if they are poor and not assisted by expert counsel in the field. States could move the matters forward by promoting harmonization of laws and by agreement to extend such access and remedies.

(8) It may be noted that with respect to choice of forum that instead of the law of the domicile[463] of the operator, the claimant may seek recourse to a forum, which he or she deems

---

[461] 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, *ibid*., pp. 271-274. On the limitations of the non-discrimination rule, *ibid*., pp. 274-275. Also see Xue Hanqin, *Transboundary …*, *op. cit.*, pp. 106-107. Also see Alexander Kiss and Dinah Shelton, *International Environmental*, *ibid*., pp. 201-203. Birnie and Boyle, *International Law, op. cit.*, pp. 269-270, P.M. Dupuy, "La contribution du principe de non discrimination a l'élaboration du droit international de l'environnement", *Revue Québécoise de Droit International,* vol. 7 (1991-1992), p. 135. For the view that the principle of non-discrimination has become a principle of general international law, see Henri Smets, "Le Principe de Non-discrimination En Matière de Protection de l'Environnement", *Revue Européenne de Droit de l'Environnement*, 1/2000, at p. 3.

[462] K.W. Cuperus and Alan E. Boyle, *Articles on Private Law Remedies for …, op. cit.*, pp. 403-411, p. 406. See Lefeber, *Transboundary Environmental Interference … op. cit.*, pp. 264-266 on the divergence of State practice in matters of deciding on the choice of forum and applicable law.

[463] 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 not so settled. The Brussels Convention and the parallel Lugano Convention on Jurisdiction and the Enforcement of Judgements in Civil and Commercial Matters, Lugano, 16 September 1988 "leave the determination of 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," see C. van Bar, "Environmental Damage in Private International law", *Recueil des Cours ...* , vol. 268 (1997), 295-411, at p. 336.

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.[464] It has been asserted that the provision of such a choice is considered to be based on "a trend now firmly established in both Conventions on international jurisdiction and in national systems".[465] Under the 1968 Brussels Convention on Jurisdiction and the Enforcement of Judgments in Civil and Commercial Matters 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 1993 Lugano Convention, article 17 of the Basel Protocol, and article 13 of Kiev Protocol 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.[466]

(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.[467] These may include mixed claims

[464] See the International Law Association, Second Report (by Christophe Bernasconi and Gerrit Betlem) on Transnational Enforcement of Environmental Law, International Law Association, Berlin Conference (2004), Report of the Seventy-First Conference, Berlin, 2004, pp. 896-938, p. 900. A defence against this ground of jurisdiction is however admissible if it can be established that damage in the State, not being the State of origin, is not foreseeable.

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

[466] The "most favourable law principle" is adopted in several jurisdictions in Europe, Venezuela, and Tunisia. 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.

[467] In the case of damage caused to the 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. Department of State Bulletin, Washington DC, vol. 32, No. 812, 17 January 1955, pp. 90-91. For similar payment of C$ 3 million by way of compensation by the USSR to Canada following the crash of Cosmos 954 in January 1978. ILM vol. 18, 1979, p. 907. Sands notes that though 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, Philippe Sands, *Principles*, *op. cit.*, 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 shooting the Iranian Airbus 655 by the USS Vincennes. States may also conclude treaties setting up international claims

commissions, negotiations for lump sum payments, etc. 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.[468] Victims could immediately be given reasonable compensation on a provisional basis, pending decision on the admissibility of 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.[469]

(11) The United Nations Compensation Commission[470] and the Iran-United States Claims Tribunal[471] 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 time-lags 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

---

commission to settle compensation claims as between private parties. See Lefeber, *Transboundary Environmental Interference*, *op. cit.*, p. 238, fn. 21. Mention may also be made of the draft articles 21 and 22 adopted by the working group of the Commission in 1996. 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. For the report of the Working Group of the Commission, 1996, *Official Records of the General Assembly, Fifty-first Session Supplement No. 10* (A/51/10), pp. 320-327.

[468] 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 then litigated before the Supreme Court of India. The Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985 provide the basis for the consolidation of claims. The Supreme Court of India in the *Union Carbide Corporation v. Union of India and others, All India Reports* 1990 SC 273 gave an order settling the quantum of compensation to be paid in lump sum. It provided for the Union Carbide to pay a lump sum of $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. The original claim of the Indian Government was over $1 billion.

[469] For the April 2002 award of $324, 949,311 to people of Enewatak in respect of damages to the land arising out of nuclear programmes carried out by the United States between 1946-1958, see ILM vol. 39 (2000), p. 1214.

[470] On the procedure adopted by the United Nations Claims Commission, see Mojtaba Kazazi, "Environmental Damage in the Practice of the United Nations Compensation Commission", in Michael Bowman and Alan Boyle, *Environmental Damage … op. cit.*, pp. 111-13.

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

requiring victims to pursue their claims in foreign national judicial and other forums may be "very complex, costly and ultimately devoid of guarantee of success".[472] 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.[473] 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.[474]

---

[472] See Lefeber, *Transboundary Environmental Interference … op. cit.*, footnote 104, p. 259.

[473] (i) In Ixtoc I blowout in June 1979 in the Bay of Campeche off the coast of Mexico, pp. 239-240 (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 involving US$ 12.5 million clean-up costs and an estimated US$ 400 million loss by the fishing and tourism industry; settled out of court between the United States Government and the United States company without going into questions of formal liability. Paid US$ 2 million to the United States Government, and US$ 2.14 million towards losses suffered by fishermen, tourist resorts, and others affected by the oil spill) ILM vol. 22 (1983) p. 580; (ii) the Cherry Point Oil Spill, pp. 249 (Canada and Atlantic Richfield Oil Refinery, a corporation of the United States of America settled claims out of court, in respect of an oil spill caused by a Liberian tanker while unloading oil at Cherry Point, State of Washington, in the United States waters causing oil pollution to the Canadian beaches in the west coast) Canadian Yearbook of International Law, vol. XI (1973) p. 333; the Sandoz case, Lefeber, *Transboundary Environmental Interference ... op.cit.*, pp. 251-252 (The water used to extinguish fire that broke out at the Sandoz Chemical Corporation on 1 November 1986 polluted the River Rhine, 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 fishing freshwater industry. The settlement of claims was at private level. More than 1,000 claims were settled in the amount of 36 million German marks. Most of the compensation was paid to States but some private parties also received compensation); Bhopal Gas case, in Lefeber, pp. 253-254 (claim was settled out of court between the Union Carbide Corporation, the United States of America and the Government of India for US$ 470 million, while the initial claim for compensation was more than that); The *Mines de Potasse d'Alsace*, in Lefeber, pp. 254-258 (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. Governments concerned, Switzerland, France, Germany, and the Netherlands negotiated an agreement to reduce the chloride pollution in 1976 at Bonn which came into force only in 1985 but it did not last. Another Protocol was concluded in 1991. 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 a 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 to the tune of US$ 2 million in favour of the cooperatives of the market gardeners. Claims of potable water industry did not succeed in the court of France 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 the damage). See also Secretariat Survey of Liability regimes, A/CN.4/543, paras. 399-433.

[474] Lefeber, *Transboundary Environmental Interference, ... ibid.*, p. 260.

(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 much expense. Paragraph 5 may equally be applicable in respect of international procedures contemplated in paragraph 4. States should collect and maintain the information as part of performance of their duties of due diligence and make it available to those that are interested in seeking the information.[475] Elements of information include: the precise nature of risk, the standards of safety required, financial base of the activity, provisions concerning 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 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, in all its varied dimensions, a legally enforceable right is taking time.[476] Such a right of access is contained in several instruments.[477]

---

[475] 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/fullact1.asp?tfnm=200522.

[476] The Scandinavian countries, the countries in the European Union and the United States have progressed along the route to make the right of access to information but there is still a lot that needs to be achieved even in the context of those countries, and even more so in other jurisdictions, see S. Coliver, P. Hoffman, J. Fitzpatrick and S. Bowen (eds.) *Secrecy and Liberty: National Security, Freedom of Expression and Access to Information* (The Hague: Kluwer Academic Publishers, 1999); U. Oberg, EU Citizens' Right to Know: The Improbable Adoption of a European Freedom of Information Act, *Cambridge Yearbook of European Legal Studies*, vol. 2 (2000), p. 303. "Right to know" laws have been enacted in at least 25 United States States and in Canada. For information on these and other initiatives and analysis of the right of access to information, see Peter H. Sand, "Information Disclosure as an Instrument of Environmental Governance", *Zeitschrift fur ausländisches öffentlisches Recht und Völkerrecht*, 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 Justice Peter Salmon, "Access to Environmental justice", N.Z.J. Environmental Law, vol. 2 (1998), pp. 1-23, pp. 9-11. The World Bank is also implementing procedures to promote public disclosure of operational information concerning the projects it supports worldwide. See I.F.I. Shihata, *The World Bank Inspection Panel* (1994).

[477] See: the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 1998, which is in force since 30 October 2001, the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (article 9), 1993 Lugano Convention on Environmental Liability (articles 15 and 16), the 1995 UN/ECE Sofia Guidelines on access to information and public participation in environmental decision-making (articles 4 and 5); the EU Council/Parliament Directive 2003/4/EC of 28 January 2003. See also Secretariat Survey of Liability Regimes, document A/CN.4/543, paras. 287-336.

(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 readily made 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 with minimal expenses.

(16) Also implicated in the present draft principles is the question of 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 for victims to 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, no fair trial, public policy, 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 possibilities exist.[478]

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.

[478] For example, the US District Court which dismissed the Indian claims for compensation in the Bhopal case, on grounds of forum non-convenience, and referred the plaintiffs to courts in India, stipulated that judgments rendered in India could be enforced in the United States, Lefeber, *Transboundary Environmental Interference …*, *op. cit.*, pp. 267-268.

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. Paragraph 1 encourages States to conclude specific global, regional or bilateral agreements where such approaches would provide the most effective arrangements in areas which the present principles are concerned about: (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 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".[479]

Principle 8

Implementation

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

[479] *Yearbook … 1980*, vol. II (Part One) p. 247, Preliminary Report, doc. A/CN.4/334, p. 250, para. 9.

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 Kiev Protocol. 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 that it requires to be implemented 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.