Chapter VII

INTERNATIONAL LIABILITY FOR INJURIOUS CONSEQUENCES ARISING OUT OF ACTS NOT PROHIBITED BY INTERNATIONAL LAW (INTERNATIONAL LIABILITY IN CASE OF LOSS FROM TRANSBOUNDARY HARM ARISING OUT OF HAZARDOUS ACTIVITIES)

A. Introduction

158. The Commission, at its thirtieth session, in 1978, included the topic "International liability for injurious consequences arising out of acts not prohibited by international law" in its programme of work and appointed Mr. Robert Q. Quentin-Baxter Special Rapporteur.[333]

159. The Commission, from its thirty-second session, held in 1980, to its thirty-sixth session, held in 1984, received and considered five reports from the Special Rapporteur.[334] The reports sought to develop a conceptual basis and schematic outline for the topic and contained proposals for five draft articles. The schematic outline was set out in the Special Rapporteur's third report to the thirty-fourth session of the Commission, in 1982. The five draft articles were proposed in the Special Rapporteur's fifth report to the thirty-sixth session of the Commission. They were considered by the Commission, but no decision was taken to refer them to the Drafting Committee.[335]

160. The Commission, at its thirty-seventh session, in 1985, appointed Mr. Julio Barboza Special Rapporteur for the topic. The Commission received 12 reports from the Special Rapporteur from its thirty-seventh session to its forty-eighth session, held in 1996.[336]

161. At its forty-fourth session, in 1992, the Commission established a working group to consider some of the general issues relating to the scope, the approach to be taken and the possible direction of the future work on the topic.[337] On the basis of the recommendation of the Working Group, the Commission decided to continue the work on this topic in stages: first completing work on prevention of transboundary harm and subsequently proceeding with remedial measures.[338] The Commission decided, in view of the ambiguity in the title of the topic, to continue with the working hypothesis that the topic deal with "activities" and to defer any formal change of the title.

162. At its forty-eighth session, held in 1996, the Commission re-established the Working Group in order to review the topic in all its aspects in the light of the reports of the Special Rapporteur and the discussions held, over the years, in the Commission and make recommendations to the Commission. The Working Group submitted a report,[339] which provided a complete picture of the topic relating to the principle of prevention and that of liability for compensation or other relief, presenting articles and commentaries thereto.

163. At its forty-ninth session, held in 1997, the Commission established a Working Group on international liability for injurious consequences arising out of acts not prohibited by international law to consider how the Commission should proceed with its work on this topic.[340] It reviewed the work of the Commission on the topic since 1978, noting that the scope and the content of the topic remained unclear due to such factors as conceptual and theoretical difficulties, appropriateness of the title and the relation of the subject to "State responsibility". The Working Group further noted that the two issues dealt with under the topic, namely "prevention" and "international liability", were distinct from one another,

[333] At that session the Commission established a working group to consider, in a preliminary manner, the scope and nature of the topic. For the report of the Working Group, see *Yearbook ... 1978*, vol. II (Part Two), pp. 150–152.

[334] For the five reports of the Special Rapporteur, see preliminary report: *Yearbook ... 1980*, vol. II (Part One), document A/CN.4/334 and Add.1 and 2, p. 247; second report: *Yearbook ... 1981*, vol. II (Part One), document A/CN.4/346 and Add.1 and 2, p. 103; third report: *Yearbook ... 1982*, vol. II (Part One), document A/CN.4/360, p. 51; fourth report: *Yearbook ... 1983*, vol. II (Part One), document A/CN.4/373, p. 201; and fifth report: *Yearbook ... 1984*, vol. II (Part One), document A/CN.4/383 and Add.1, p. 155.

[335] The Commission, at the same thirty-sixth session, also had before it the replies to a questionnaire addressed in 1983 by the Legal Counsel of the United Nations to 16 selected international organizations to ascertain whether, amongst other matters, obligations which States owe to each other and discharge as members of international organizations may, to that extent, fulfil or replace some of the procedures referred to in the schematic outline, *Yearbook ... 1984*, vol. II (Part One), document A/CN.4/378, p. 129; and a study prepared by the secretariat entitled "Survey of State practice relevant to international liability for injurious consequences arising out of acts not prohibited by international law", *Yearbook ... 1985*, vol. II (Part One), Addendum, document A/CN.4/384, p. 1. See also the survey prepared by the Secretariat of liability regimes relevant to the topic of "international liability for injurious consequences arising out of acts not prohibited by international law", *Yearbook ... 1995*, vol. II (Part One), document A/CN.4/471, p. 61.

[336] For the 12 reports of the Special Rapporteur, see preliminary report: *Yearbook ... 1985*, vol. II (Part One), document A/CN.4/394, p. 97; second report: *Yearbook ... 1986*, vol. II (Part One), document A/CN.4/402, p. 145; third report: *Yearbook ... 1987*, vol. II (Part One), document A/CN.4/405, p. 47; fourth report: *Yearbook ... 1988*, vol. II (Part One), document A/CN.4/413, p. 251; fifth report: *Yearbook ... 1989*, vol. II (Part One), document A/CN.4/423, p. 131; sixth report: *Yearbook ... 1990*, vol. II (Part One), document A/CN.4/428 and Add.1, p. 83; seventh report: *Yearbook ... 1991*, vol. II (Part One), document A/CN.4/437, p. 71; eighth report: *Yearbook ... 1992*, vol. II (Part One), document A/CN.4/443, p. 59; ninth report: *Yearbook ... 1993*, vol. II (Part One), document A/CN.4/450, p. 187; tenth report: *Yearbook ... 1994*, vol. II (Part One), document A/CN.4/459, p. 129; eleventh report: *Yearbook ... 1995*, vol. II (Part One), document A/CN.4/468, p. 51; and twelfth report: *Yearbook ... 1996*, vol. II (Part One), document A/CN.4/475 and Add.1, p. 29.

[337] See *Yearbook ... 1992*, vol. II (Part Two), document A/47/10, p. 51; paras. 341–343.

[338] For a detailed recommendation of the Commission see *ibid.*, paras. 344–349.

[339] *Yearbook ... 1996*, vol. II (Part Two), Annex I, p. 100.

[340] *Yearbook ... 1997*, vol. II (Part Two), p. 59, para. 162.

though related. The Working Group therefore agreed that henceforth these issues should be dealt with separately.

164. Accordingly, the Commission decided to proceed with its work on the topic, dealing first with the issue of prevention under the subtitle "Prevention of transboundary damage from hazardous activities".[341] The General Assembly took note of this decision in paragraph 7 of its resolution 52/156. At the same session, the Commission appointed Mr. Pemmaraju Sreenivasa Rao Special Rapporteur for this part of the topic.[342] The Commission, from its fiftieth session, held in 1998, to its fifty-second session, in 2000, received three reports from the Special Rapporteur.[343]

165. At its fiftieth session, held in 1998, the Commission adopted on first reading a set of 17 draft articles on prevention of transboundary harm from hazardous activities.[344] At the fifty-third session, in 2001, it adopted the final text of a draft preamble and a set of 19 draft articles on prevention of transboundary harm from hazardous activities,[345] thus concluding its work on the first part of the topic. Furthermore, the Commission recommended to the General Assembly the elaboration of a convention on the basis of the draft articles.[346]

166. The General Assembly, in paragraph 3 of resolution 56/82, requested the Commission to resume its consideration of the liability aspects of the topic, bearing in mind the interrelationship between prevention and liability, and taking into account the developments in international law and comments by Governments.

167. At its fifty-fourth session, held in 2002, the Commission resumed its consideration of the second part of the topic and established a Working Group on international liability for injurious consequences arising out of acts not prohibited by international law to consider the conceptual outline of the topic.[347] The report of the Working Group[348] set out some initial understandings on the topic "International liability for injurious consequences arising out of acts not prohibited by international law (international liability in case of loss from transboundary harm arising out of hazardous activities)", and presented views on its scope and the approaches to be pursued. The Commission adopted the report of the Working Group and appointed Mr. Pemmaraju Sreenivasa Rao Special Rapporteur for the topic.[349]

168. At its fifty-fifth session, held in 2003, the Commission considered the first report of the Special Rapporteur on the legal regime for the allocation of loss in case of transboundary harm arising out of hazardous activities[350] and established an open-ended working group under the chairpersonship of Mr. Pemmaraju Sreenivasa Rao to assist the Special Rapporteur in considering the future orientation of the topic in the light of his report and the debate in the Commission.

B. Consideration of the topic at the present session

169. At the present session, the Commission had before it the second report of the Special Rapporteur on the legal regime for the allocation of loss in case of transboundary harm arising out of hazardous activities (A/CN.4/540). The report analysed comments of States on the main issues concerning allocation of loss. It drew general conclusions in the light of these comments as well as previous debates in the Commission. In his report, the Special Rapporteur also submitted a set of 12 draft principles.[351] The Commission considered the report at its 2804th, 2805th, 2807th, 2808th and 2809th meetings on

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[341] *Ibid.*, para 168 (*a*).

[342] *Ibid.*

[343] For the three reports of the Special Rapporteur, see preliminary report: *Yearbook ... 1998*, vol. II (Part One), document A/CN.4/487 and Add.1, p. 175; second report: *Yearbook ... 1999*, vol II (Part One), document A/CN.4/501, p. 111; and third report: *Yearbook ... 2000*, vol. II (Part One), document A/CN.4/510, p. 113. The Commission also had before it comments and observations from Governments: *Yearbook ... 2000*, vol. II (Part One), A/CN.4/509, p. 127; and *Yearbook ... 2001*, vol. II (Part One), document A/CN.4/516, p. 169 (received in 2001).

[344] *Yearbook ... 1998*, vol. II (Part Two), pp. 20–21, para. 52.

[345] *Yearbook ... 2001*, vol. II (Part Two), pp. 146–148, para. 97.

[346] *Ibid.*, para. 94.

[347] *Yearbook ... 2002*, vol. II (Part Two), p. 90, para. 441.

[348] *Ibid.*, pp. 90–92, paras. 442–457.

[349] *Ibid.*, p. 90, para. 441.

[350] *Yearbook ... 2003*, vol. II (Part One), document A/CN.4/531.

[351] The set of the draft principles proposed by the Special Rapporteur read as follows:

"1. Scope of application

The present draft principles apply to damage caused by hazardous activities coming within the scope of the draft articles on prevention of transboundary harm from hazardous activities, namely activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences.

2. Use of terms

For the purposes of the present draft articles:

(*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 other than the property held by the person liable in accordance with these articles;

(iii) Loss of income from an economic interest directly deriving from an impairment of the use of property or natural resources or environment, taking into account savings and costs;

(iv) The costs of measures of reinstatement of the property, or natural resources or environment, limited to the costs of measures actually taken;

(v) The costs of response measures, including any loss or damage caused by such measures, to the extent of the damage that arises out of or results from the hazardous activity;

(*b*) "Damage to the environment" means loss or damage by impairment of the environment or natural resources;

(*c*) "Environment" 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;

(*d*) "Hazardous activity" means an activity that has a risk of causing significant or disastrous harm;

(*e*) "Operator" means any person in command or control of the activity at the time the incident causing transboundary damage occurs and may include a parent company or other related entity whether corporate or not;

(*f*) "Transboundary damage" means 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 of origin or in other places beyond the jurisdiction or control of any State including the State of origin, whether or not the States or areas concerned share a common border;

(*g*) "Measures of reinstatement" means 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. Domestic law may indicate who will be entitled to take such measures;

(Continued on next page.)

26 and 27 May and 1, 2 and 3 June 2004. The Commission also had, as an informal document, the survey of liability regimes relevant to the topic, prepared by the Secretariat.[352]

170. At its 2809th meeting, held on 3 June 2004, the Commission established a working group under the chairpersonship of Mr. Pemmaraju Sreenivasa Rao to examine the proposals submitted by the Special Rapporteur, taking into account the debate in the Commission, with a view to recommending draft principles ripe for referral to the Drafting Committee, while also continuing

(Footnote 351 continued.)

(*h*) "Response measures" means any reasonable measures taken by any person, including public authorities, following the occurrence of the transboundary damage, to prevent, minimize or mitigate possible loss or damage or to arrange for environmental clean-up. Domestic law may indicate who will be entitled to take such measures;

(*i*) "State of origin" means the State in the territory or otherwise under the jurisdiction or control of which the activities referred to in principle 1 are carried out;

(*j*) "State of injury" means the State in the territory or otherwise under the jurisdiction or control of which transboundary damage occurs;

(*k*) "State likely to be affected" means the State or States in the territory of which there is a risk of significant transboundary harm, or the State or States which have jurisdiction or control over any other place which is exposed to the risk of such harm;

(*l*) "States concerned" means the State of origin, the State likely to be affected and the State of injury.

3. Compensation of victims and protection of environment

1. The main objective of the present principles is to ensure that victims are not left entirely on their own, within the limits prescribed under national law, to bear the loss that they may suffer due to transboundary damage.

2. The objective is also to ensure that any transboundary damage to environment or natural resources even in areas or places beyond the jurisdiction or control of States arising from the hazardous activities is compensated within the limits and under conditions specified in these principles.

4. Prompt and adequate compensation

Alternative A

1. The State of origin shall take necessary measures to ensure that prompt and adequate compensation is available for persons in another State suffering transboundary damage caused by a hazardous activity located within its territory or in places under its jurisdiction or control.

2. The State of origin shall also take necessary measures to ensure that such prompt and adequate compensation is available for transboundary damage to the environment or natural resources of any State or of the areas beyond the jurisdiction and control of any State arising from the hazardous activity located within its territory or in places under its jurisdiction or control.

3. Measures referred to in paragraphs 1 and 2 above may be subject to applicable conditions, limitations or exceptions under the law of the State of origin which authorized the activity.

4. When considering evidence of the causal link between the hazardous activity and the transboundary damage, [due] account shall be taken of the risk of causing significant damage inherent in the hazardous activity.

Alternative B

1. The operator of a hazardous activity located within the territory or in places within the jurisdiction and control of a State shall be liable for the transboundary damage caused by that activity to persons or environment or natural resources within the territory or in places under the jurisdiction and control of any other State or to environment or natural resources in areas beyond the jurisdiction and control of any State.

2. The liability of the operator is subject to applicable conditions, limitations or exceptions under the law of the State of origin which authorized the activity.

3. When considering evidence of the causal link between the hazardous activity and the transboundary damage, [due] account shall be taken of the risk of causing significant damage inherent in the hazardous activity.

5. Supplementary compensation

1. The States concerned shall take the necessary measures to establish supplementary funding mechanisms to compensate victims of transboundary damage who are unable to obtain prompt and adequate compensation from the operator for a [legally] established claim for such damage under the present principles.

2. Such funding mechanisms may be developed out of contributions from the principal beneficiaries of the activity, the same class of operators, earmarked State funds or a combination thereof.

3. The States concerned shall establish criteria for determining insufficiency of compensation under the present draft principles.

6. Insurance and financial schemes

The States concerned shall take the necessary measures to ensure that the operator establishes and maintains financial security such as insurance, bonds or other financial guarantees to cover claims of compensation.

7. Response action

1. States shall require all operators involved in the conduct of activities falling within the scope of the present principles to take prompt and effective action in response to any incident involving such activities with a view to minimizing any damage from the incident, including any transboundary damage. Such response action shall include prompt notification, consultation and cooperation with all potentially affected States.

2. In the event that the operator fails to take the required prompt and effective response action the State of origin shall, where appropriate, in consultation with the States likely to be affected, make arrangements for such action.

8. Availability of recourse procedures

1. The States concerned shall ensure the availability of prompt, adequate and effective administrative and judicial remedies to all the victims of transboundary damage arising from the operation of hazardous activities.

2. States shall ensure that such remedies are no less prompt, adequate and effective than those available to their nationals and include access to such information as is necessary to exercise their right of access to compensation.

3. Each State shall ensure that its courts possess the necessary competence to entertain such claims for compensation.

9. Relationship with other rules of international law

The present set of principles is without prejudice to rights and obligations of the Parties under the rules of general international law with respect to the international responsibility of States.

10. Settlement of disputes

1. Any dispute concerning the interpretation or application of the present articles shall be settled expeditiously through peaceful means of settlement, including negotiations, mediation, conciliation, arbitration or judicial settlement.

2. For a dispute not resolved in accordance with paragraph 1, parties may by mutual agreement accept either or both of the means of dispute settlement, that is, (*a*) submission of the dispute to the International Court of Justice or (*b*) arbitration.

11. Development of more detailed and specific international regimes

1. States shall cooperate in the development of appropriate international agreements on a global or regional basis in order to prescribe more detailed arrangements regarding the prevention and response measures to be followed in respect of a particular class of hazardous activities as well as the insurance and compensation measures to be provided.

2. Such agreements may include industry- and/or State-funded compensation funds to provide supplementary compensation in the event that the financial resources of the operator, including insurance, are insufficient to cover the losses suffered as result of an incident. Any such funds may be designed to supplement or replace national industry-based funds.

12. Implementation

1. States shall adopt any legislative, regulatory and administrative measures that may be necessary to implement the above provisions.

2. These provisions and any implementing provisions shall be applied among all States without discrimination based on nationality, domicile or residence.

3. States shall cooperate with each other to implement the provisions according to their obligations under international law."

[352] Survey of liability regimes relevant to the topic of international liability for injurious consequences arising out of acts not prohibited by international law (international liability in case of loss from transboundary harm arising out of hazardous activities), *Yearbook… 2004*, vol. II (Part One), document A/CN.4/543.

discussions on other issues, including the form that work on the topic should take. The Working Group held six meetings, on 4 June, and on 6, 7 and 8 July 2004. In its work the Working Group reviewed and revised the 12 draft principles submitted by the Special Rapporteur and it recommended that the eight draft principles contained in its report (A/CN.4/661 and Corr.1) be referred to the Drafting Committee.

171. At its 2815th meeting, held on 9 July 2004, the Commission received the oral report of the Chairperson of the Working Group and decided to refer the eight draft principles to the Drafting Committee. The Commission also requested the Drafting Committee to prepare the text of a preamble.

172. At its 2822nd meeting, held on 23 July 2004, the Commission considered the report of the Drafting Committee and adopted on first reading a set of eight draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities (see section C below).

173. At its 2828th meeting, held on 4 August 2004, the Commission decided, in accordance with articles 16 and 21 of its statute to transmit the draft principles, through the Secretary-General, to Governments for comments and observations, with the request that such comments and observations be submitted to the Secretary-General by 1 January 2006.

174. At its 2829th meeting, held on 5 August 2004, the Commission expressed its deep appreciation for the outstanding contribution the Special Rapporteur Mr. Pemmaraju Sreenivasa Rao had made to the treatment of the topic through his scholarly research and vast experience, thus enabling the Commission to bring to a successful conclusion its first reading of the draft principles on the liability aspect of the topic.

C. Text of draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities adopted by the Commission on first reading

1. Text of the draft principles

175. The text of the draft principles adopted by the Commission on first reading is reproduced below.

Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities[*]

The General Assembly,

***Recalling* principles 13 and 16 of the Rio Declaration on Environment and Development,**

***Recalling also* the Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities,**

***Aware* that incidents involving hazardous activities may occur despite compliance by the relevant State with the provisions of the Draft Articles on the 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 losses,**

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

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

***Recognizing* the importance of international cooperation among States,**

***Recalling* the existence of international agreements covering specific categories of hazardous activities,**

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

…

Principle 1

Scope of application

The present draft principles apply in relation to transboundary damage caused by activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences.

Principle 2

Use of terms

For the purposes of the present draft principles:

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

(i) Loss of life or personal injury;

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

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

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

(v) The costs of reasonable response measures;

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

(*c*) “Transboundary damage” means damage caused in the territory or in other places 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 activities referred to in draft principle 1 are carried out;

(*d*) “Hazardous activity” means an activity which involves a risk of causing significant harm through its physical consequences;

(*e*) “Operator” means any person in command or control of the activity at the time the incident causing transboundary damage occurs.

[*] The Commission reserves the right to reconsider the matter of the final form of the instrument at the second reading in the light of the comments and observations of Governments. In the event that the Commission has to prepare a draft framework convention, the exercise would entail some textual changes to draft principles 4 to 8 and a few additions, especially with regard to the resolution of disputes and the relationship between the draft convention and other international instruments.

Principle 3

Objective

The present draft principles aim at ensuring prompt and adequate compensation to natural or legal persons, including States, that are victims of transboundary damage, including damage to the environment.

Principle 4

Prompt and adequate compensation

1. Each State should take 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 should 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 should also ensure that additional financial resources are allocated.

Principle 5

Response measures

With a view to minimizing any transboundary damage from an incident involving activities falling within the scope of the present draft principles, States, if necessary with the assistance of the operator, or, where appropriate, the operator, should take prompt and effective response measures. Such response measures should include prompt notification and, where appropriate, consultation and cooperation with all potentially affected States.

Principle 6

International and domestic remedies

1. States should provide appropriate procedures to ensure that compensation is provided in furtherance of draft principle 4 to victims of transboundary damage from hazardous activities.

2. Such procedures may include recourse to international claims settlement procedures that are expeditious and involve minimal expenses.

3. To the extent necessary for the purpose of providing compensation in furtherance of draft principle 4, each State should ensure that its domestic administrative and judicial mechanisms possess the necessary competence and provide effective remedies to such victims. These mechanisms should not be less prompt, adequate and effective than those available to its nationals and should include appropriate access to information necessary to pursue such mechanisms.

Principle 7

Development of specific international regimes

1. States should cooperate in the development of appropriate international agreements on a global, regional or bilateral basis in order to make arrangements regarding the prevention and response measures to be followed in respect of particular categories of hazardous activities as well as the compensation and financial security measures to be taken.

2. Such agreements may include industry- and/or State-funded compensation funds to provide supplementary compensation in the event that the financial resources of the operator, including financial security measures, are insufficient to cover the losses suffered as 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 any legislative, regulatory and administrative measures that may be necessary to implement the present draft principles.

2. The present draft principles and any implementing provisions should 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 consistent with their obligations under international law.

2. Text of the draft principles with commentaries thereto

176. The text of the draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities with commentaries thereto adopted by the Commission on first reading at its fifty-sixth session, are reproduced below.

Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities*

General commentary

(1) The background to these draft principles, together with the underlying approach, is outlined in the preamble. It places the draft principles in the context of the relevant provisions of the Rio Declaration on Environment and Development (Rio Declaration)[353] but then specifically recalls the Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities, adopted by the Commission at its fifty-third session, in 2001.[354]

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

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* The Commission reserves the right to reconsider the matter of the final form of the instrument at the second reading in the light of the comments and observations of Governments. In the event that the Commission has to prepare a draft framework convention, the exercise would entail some textual changes to draft principles 4 to 8 and a few additions, especially with regard to the resolution of disputes and the relationship between the draft convention and other international instruments.

[353] *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.

[354] See footnote 322 above.

(3) It is important, as the preamble indicates, 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.

(4) These draft principles establish the means by which this may be accomplished.

(5) 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.

(6) The draft principles are therefore intended to contribute to the further 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.

(7) The preamble also makes the point that States are responsible under international law for complying with 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.

(8) 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 legal 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.[355] Secondly, there is an understanding that the scope of the liability aspects should be the same as the scope of the draft articles on prevention of transboundary harm from hazardous activities, which the Commission also adopted in 2001.[356] In particular, it is also agreed that to trigger the regime governing transboundary damage, the same threshold, "significant", that is made applicable in the case of transboundary harm should be 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 have their own particular features, the Commission came to the conclusion that they require separate treatment.[357] Thirdly, there is also agreement to proceed 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 should 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.

[355] See footnote 4 above.

[356] See footnote 322 above.

[357] See *Yearbook... 2002*, vol. II (Part Two), p. 91, para. 447.

(9) Fourthly, the various existing models of liability and compensation have confirmed that State liability is an exception and accepted essentially in the case of outer space activities. Accordingly, there is also general agreement that liability for activities falling within the scope of the present draft principles should be attached primarily to the operator, and that such liability would be without requiring proof of fault, and may be limited or subject to exceptions, taking into account social, economic and other policy considerations. However, it is equally recognized that such liability need not always be placed on the operator of a hazardous or a risk-bearing activity. The important point is that the person most in command or other persons or entities as appropriate may also be held liable.

(10) Fifthly, it may be noted that there is a consensus in favour of providing for supplementary funding in any scheme of allocation of loss and that such funding 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 the State. In view of the general and residual character, it is not considered necessary to predetermine the shares of different actors and precisely identify the role to be assigned to the State. It is at the same time recognized that the State has, under international law, duties of prevention and these entail certain minimum standards of due diligence.[358] 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, as appropriate, to evaluate applications for authorization and determine appropriate arrangements to monitor the same. 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.

(11) Sixthly, there is broad agreement 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 either civil liability or criminal liability or both, and would depend on a number of variables. Principles of civil law, common law or private international law governing choice of forums as well as applicable law may come into focus depending upon the context and the jurisdiction involved. Accordingly, the proposed scheme is not only general and residual but also flexible without any prejudice to the claims that might arise and the applicable law and procedures.

(12) Finally, on the form of instrument, different views have been advanced at this stage. On the one hand, it has been suggested that they should be cast as draft articles

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

and thereby be a counterpart in form as well as substance to the draft articles on prevention.

(13) On the other hand, it has been pointed out that, as they are inevitably general and residual in character, they are more appropriately cast as 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.

(14) On balance, the Commission concluded that recommended draft principles would have the advantage of not requiring a potentially unachievable harmonization of national laws and legal systems. It is also of the view that the goal of widespread acceptance of the substantive provisions is more likely to be met if they are cast as recommended draft principles. But as noted in the footnote to the title, the Commission has reserved the right to reconsider the matter of the final form of the instrument at the second reading in the light of the comments and observations of Governments.

Preamble

***The General Assembly*,**

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

***Recalling also* the Draft articles on the Prevention of Transboundary Harm from Hazardous Activities,**

***Aware* that incidents involving hazardous activities may occur despite compliance by the relevant State with the provisions of the Draft articles on the 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 losses,**

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

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

***Recognizing* the importance of international cooperation among States,**

***Recalling* the existence of international agreements covering specific categories of hazardous activities,**

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

…

Commentary

(1) In the past the Commission has generally presented to the General Assembly sets of draft articles without a draft preamble, leaving its elaboration to States. However, there have also been precedents during which the Commission has submitted a draft preamble. This was the case with respect to the draft convention on the elimination of future statelessness and the draft convention on the reduction of future statelessness,[359] the draft articles on the nationality of natural persons in relation to the succession of States,[360] as well as with respect to the draft articles on prevention.[361]

(2) As noted in the introduction, the *first* preambular paragraph commences with a reference to Principles 13 and 16 of the Rio Declaration.[362] The need to develop national law regarding liability and compensation for the victims of pollution and other environmental damage is stressed in Principle 13 of that Declaration, which reiterates Principle 22 of the Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration).[363] Principle 16 of the Rio Declaration addresses the promotion of internalization of environmental costs, taking into account the “polluter pays” principle.

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

(4) The *sixth* preambular paragraph stresses that these draft principles do not affect the responsibility that a State may incur as a result of infringement of its preventive obligations under international law.

(5) The last three preambular paragraphs are self-explanatory. The *seventh* preambular paragraph recognizes the importance of international cooperation in this field. The *eighth* preambular paragraph recognizes the existence of specific international agreements for various categories of hazardous activities. The *last* preambular paragraph highlights the importance of the present exercise to further advance the development of international law in this field.

Principle 1

Scope of application

The present draft principles apply in relation to transboundary damage caused by activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences.

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[359] *Yearbook ... 1954*, vol. II, document A/2693, p. 143.

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

[361] See footnote 322 above.

[362] See footnote 353 above.

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

Commentary

(1) The draft principle on the scope of application is drafted to reflect the agreement to maintain the scope of the 2001 draft articles on prevention of transboundary harm from hazardous activities for the present principles on transboundary damage also.[364] The interrelated nature of the concepts of "prevention" and "liability" needs no particular emphasis in the context of the work of the Commission.[365] Draft principle 1 identifies that the focus of the present 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, activities coming within the scope of the present draft principles are those that 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 ultra-hazardous activity, which involves, at a minimum, a risk of significant transboundary harm, is covered. An ultra-hazardous activity is perceived to be an activity, though normally well-managed to remain safe, with a possibility of materializing in damage of grave (more than significant, serious or substantial) proportions, on the rare occasion when it happens.

(3) Suggestions have been made at different stages of the evolution of the topic on international liability to specify a list of activities with an option to add or delete items to such a list. As with the draft articles on prevention, the Commission opted to dispense with such specification. 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 would quickly need review in the light of ever-evolving technological developments. Further, except for certain ultra-hazardous 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 application of a particular technology, 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 draft principles are already the subject of the requirement of prior authorization under the draft articles on prevention.

(4) Moreover, it is always open to States to specify activities coming within the scope of the present draft principles through multilateral, regional or bilateral arrangements or to do so in their national legislation.[366]

(5) The phrase "activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences" 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. All these elements—the element of human causation; the risk element; the (extra-)territorial element; and the physical element—as adapted from, and explained in the context of, the draft articles on prevention have been preserved.[367]

(6) This particular phrase "activities not prohibited by international law" has been adopted essentially to distinguish the operation of the present draft 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.[368] That is, for the purpose of the draft principles, the focus is on the consequences of the activities and not on the lawfulness of the activity itself.

(7) 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.[369] In such

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[364] See footnote 322 above.

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

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

[367] See *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 149–151 (commentary to draft article 1).

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

[369] See *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 150 (paragraph (6) of the commentary to article 1). See also M. B. Akehurst, "International liability for injurious consequences arising out of acts not prohibited by international law", *Netherlands Yearbook of International Law*, vol. 16, The Hague, Martinus Nijhoff, 1985, pp. 3–16; A. E. Boyle, "State responsibility and international liability for injurious consequences of acts not prohibited by international law: a necessary distinction?", *International and Comparative Law Quarterly*, vol. 39 (1990), pp. 1–26; K. Zemanek, "State responsibility and liability", in W. Lang, H. Neuhold and K. Zemanek (eds.), *Environmental Protection and International Law*, London, Graham and Trotman/Martinus Nijhoff, 1991, p. 197; the second report on international liability for injurious consequences arising out of acts not prohibited by international law (prevention of transboundary harm from hazardous activities) by Special Rapporteur Pemmaraju Sreenivasa Rao, *Yearbook… 1999*, vol. II (Part One), document A/CN.4/501, paras. 35–37;

(Continued on next page.)

a case, State responsibility could be invoked to implement not only the obligations of the State itself but also the civil responsibility or duty of the operator.[370] Indeed, this is well understood throughout the work on draft articles on prevention.[371]

(8) 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.[372] In other words, transboundary harm could occur accidentally or it may take place in circumstances not originally anticipated. Further, damage 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.[373]

(9) The focus of the present draft principles is on damage caused, irrespective of the fulfilment of duties of due diligence as set out in the draft articles on prevention. However, where there is failure to perform those due diligence obligations on the part of the State of origin, claims concerning State responsibility for wrongful acts may also be made in addition to claims for compensation envisaged by the present draft principles.

(10) The second criterion is that activities covered in these draft principles are those that originally carried a "risk of causing significant transboundary harm". The expression "risk of causing significant transboundary harm", as defined in the commentary to article 2 (*a*) of the draft articles on prevention, "[encompasses] a low probability of causing disastrous transboundary harm or a high probability of causing significant transboundary harm".[374] Thus, the term refers to the combined effect of the probability of occurrence of an accident and the magnitude of its injurious impact. It is, therefore, the combined effect of "risk" and "harm" producing an effect that is deemed significant.

(11) The term "significant" is understood to refer to "*something more than 'detectable' but need not be at the level of 'serious' or 'substantial'*".[375] The harm must lead to a real detrimental effect on matters such as, for example, human health, industry, property, environment or agriculture in other States. Such detrimental effects must be susceptible of being measured by factual and objective standards. The ecological unity of the planet does not correspond to political boundaries. In carrying out lawful activities within their own territories, States have impacts on each other. These mutual impacts, so long as they have not reached the level of "significant", are considered tolerable and do not fall within the scope of the present draft principles.

(12) The third criterion is related to the transboundary nature of the damage caused by the activities concerned. "Transboundary damage" is defined in draft principle 2. It links transboundary damage to the territory or other places under the jurisdiction or control of a State other than the State in which the activity is carried out. Thus three concepts are covered by this criterion, namely "territory", "jurisdiction" and "control". These concepts are defined in the draft articles on prevention.[376] The activities must be conducted in the territory or otherwise under the jurisdiction or control of one State and have an impact in the territory or in other places under the jurisdiction or control of another State.

(13) The fourth criterion to delimit the scope of the topic is that the significant transboundary harm must have been caused by the "physical consequences" of activities in question. Thus, transboundary harm caused by State policies in monetary, socio-economic or similar fields is excluded from the scope of the topic.[377]

(14) Finally, the draft principles are concerned with "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

(Footnote 369 continued.)

J. Barboza, "La responsabilité 'causale' à la Commission du droit international", *Annuaire français de droit international*, vol. 34 (1988), pp. 513–522; Ph. Cahier, "Le problème de la responsabilité pour risque en droit international", in *International Relations in a Changing World*, Leyden, Sijthoff, 1977, pp. 409–434; C. G. Laubet, "Le droit internationale en quête d'une responsabilité pour les dommages résultant d'activités qu'il n'interdit pas", *Annuaire français de droit international*, vol. 29 (1983), pp. 99–120; D. Lévy, "La responsabilité pour omission et la responsabilité pour risque en droit international public", *Revue générale de droit international public*, vol. 32, No. 1 (1961), pp. 744–764; and P. Šturma, "La responsabilité en dehors de l'illicite en droit international économique", *Polish Yearbook of International Law*, vol. 20 (1993), pp. 91–112.

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

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

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

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

[374] *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 152 (para. (1) of the commentary to art. 2).

[375] *Ibid.* (para. (4) of the commentary to art. 2).

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

[377] *Ibid.* p. 151 (paras. (16) and (17) of the commentary to art. 1).

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 "damage" is introduced to denote specificity to the transboundary harm which occurred. The term also has the advantage of familiarity. It is the usual term used in liability regimes.[378] The word "transboundary" qualifies "damage" to stress the transboundary orientation pursued for the scope of the present draft principles. The phrase "in relation to transboundary damage" is intended to emphasize the broad range of issues concerning damage, which the present draft principles address and these go beyond the principle of prompt and adequate compensation.

Principle 2

Use of terms

For the purposes of the present draft principles:

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

(i) Loss of life or personal injury;

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

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

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

(v) The costs of reasonable response measures;

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

(*c*) "Transboundary damage" means damage caused in the territory or in other places 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 activities referred to in draft principle 1 are carried out;

(*d*) "Hazardous activity" means an activity which involves a risk of causing significant harm through its physical consequences;

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

Commentary

(1) The definition of damage is crucial for the purposes of the present draft principles. The elements of damage are identified in part to set out the basis of claims for damage. Before identifying the elements of damage, it is important to note that damage, to be eligible for compensation, should reach a certain threshold and that in turn would trigger the operation of the present draft principles. For example, the *Trail Smelter* award was concerned only with the "serious consequences" of the operation of the smelter at the Trail.[379] The *Lake Lanoux* award dealt with only serious injury.[380] A number of conventions have also referred to "significant", "serious" or "substantial" harm or damage as the threshold for giving rise to legal claims.[381] "Significant" has also been used in other legal instruments and domestic law.[382]

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[378] Damage is defined in: article 2, paragraph 2 (*c*) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal; article 2, paragraph 2 (*d*) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters; article 2, paragraph 7 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment; article 1, paragraph 6 of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention); and article 1, paragraph 10 of the Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD). See also article 2, paragraph 2 of the 2004 European Parliament and the Council Directive 2004/35/CE on environmental liability with regard to prevention and remedying of environmental damage (footnote 366 above); and article I (a) of the Convention on the international liability for damage caused by space objects.

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

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

See also article 1 (15) of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA), which defines damage to the Antarctic environment or dependent or associated ecosystems; and the Convention on the Law of the Non-Navigational Uses of International Watercourses which seeks in article 7 to "prevent the causing of significant harm".

[379] *Trail Smelter* (see footnote 204 above), p. 1970.

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

[381] See, for example, article 4 (2) of the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA); paragraphs (1) and (2) of article 2 of the Convention on Environmental Impact Assessment in a Transboundary Context; and article 7 of the Convention on the Law of the Non-navigational Uses of International Watercourses.

[382] 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 (OAS, *Ríos y lagos internacionales (utilización para fines agrícolas e industriales)*, 4th ed. rev. (OEA/Ser.1/VI, CIJ-75 Rev.2) (Washington D.C., 1971, p. 132)); article X of the Helsinki Rules on the Uses of the Waters of International Rivers (International Law Association, *Report of the Fifty-second Conference, Helsinki, 1966*, London, 1967, p. 496); article 21 of the [Revised] International Law Association Rules on Equitable Use and Sustainable Development of Waters (tenth draft, February 2004) (International Law Association, *Report of the Seventy-First Conference, Berlin, 16–21 August 2004*, London, 2004, p. 334); paragraphs 1 and 2

(Continued on next page.)

(2) 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 certain deprivation at a particular time might not be considered "significant" because at that specific time scientific knowledge or human appreciation might have considered that deprivation as tolerable. But some time later that view might change and the same deprivation might then be considered "significant damage". The sensitivity of the international community to air and water pollution levels has been constantly changing.

(3) *Paragraph (a)* defines "damage", as significant damage caused to persons, property or the environment. Subparagraphs (i) and (ii) cover personal injury and property damage and aspects of pure economic loss, as well as aspects of national cultural heritage, which may be State property. Damage does not occur in isolation or in a vacuum. It occurs to somebody or something.

(4) Thus, in *subparagraph (i)* damage to persons includes loss of life or personal injury. There are examples in domestic law[383] and in treaty practice.[384] Even those liability regimes that are only concerned with environmental injury, which do not directly address injury to persons, recognize that other rules would apply.[385] Those regimes that are silent on the matter do not also seem to entirely exclude the possible submission of a claim under this heading of damage.[386]

(5) 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[387] and in treaty practice.[388] For policy considerations, some liability regimes exclude damage to the property of the person liable. A tortfeasor is not allowed to benefit from his or her own wrongs. Article 2 (2) (c) (ii) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal, article 2 (7) (b) of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment and article 2 (2) (d) (ii) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters contain provisions to this effect.

(6) Traditionally, proprietary rights have been more concerned about the private rights of the individual rather than rights of the public. An individual would face no difficulty in pursuing a claim concerning his personal or proprietary rights. These are claims concerning possessory or proprietary interests which involve 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 the environment. This is the case with property damage, personal injury or aspects of pure economic loss sustained as a consequence of damage to the environment. In this connection, a distinction is often made between consequential and pure economic losses.[389]

(Footnote 382 continued.)

of General Assembly resolution 2995 (XXVII) of 15 December 1972 concerning cooperation between States in the field of the environment; paragraph 6 of the annex to OECD Council recommendation C(74)224 of 14 November 1974 on Principles concerning transfrontier pollution (OECD, *OECD and the Environment*, Paris, 1986, p. 142, reprinted in ILM, vol. 14, No. 1 (January 1975), p. 246); the Memorandum of Intent constituting an agreement concerning transboundary air pollution, between the Government of the United States and the Government of Canada, of 5 August 1980 (United Nations, *Treaty Series*, vol. 1274, No. 21009, p. 235); and article 7 of the Agreement between the United Mexican States and the United States of America on Cooperation for the Protection and Improvement of the Environment in the Border Area, signed on 14 August 1983 (*ibid.*, vol. 1352, No. 22805, p. 73, reproduced in ILM, vol. 22, No. 5 (September 1983), p. 1025). The United States has also used the word "significant" in its domestic law dealing with environmental issues. See American Law Institute, *Restatement of the Law Third, Foreign Relations Law of the United States*, vol. 2, St. Paul (Minnesota), American Law Institute Publishers, 1987, pp. 111–112.

[383] Germany's Environmental Liability Act, for example, covers anybody who suffers death or personal injury. Finland's Act on Compensation for Environmental Damage, the Swedish Environmental Code, and Denmark's Act on Compensation for Environmental Damage all cover personal injury.

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

[385] Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (see footnote 366 above) does not apply to cases of personal injury, to damage to private property or to any economic loss and does not affect any rights regarding such types of damages.

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

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

[388] See examples in footnote 384 above.

[389] See B. Sandvik and S. Suikkari, "Harm and reparation in international treaty regimes: An overview", in P. Wetterstein (ed.) (footnote 373 above), p. 57. See generally E. H. P. Brans, *Liability for Damage to Public Natural Resources: Standing, Damage and Damage Assessment*, The Hague, Kluwer Law International, 2001, pp. 9–63. See also the eleventh report on international liability for injurious consequences arising out of acts not prohibited by international law of the Special Rapporteur, Julio Barboza (footnote 336 above).

(7) Consequential economic losses are the result of a loss of life or personal injury or damage to property. These would include loss of earnings as a result of personal injury. 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…".[390] Similarly, section 252 of the German Civil Code provides that any loss of profit is to be compensated. For the purposes of the present draft principles, this type of damage is to be covered under subparagraphs (i) and (ii).[391] There are therefore different approaches on compensation for loss of income. However, 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 serious loss of income for a victim, the State concerned would act to ensure that the victim is not left to bear the loss unsupported.

(8) On the other hand, pure economic loss is not linked to personal injury or damage to property. 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 occurrences have led to claims for pure economic loss without much success. However, some domestic legislation and liability regimes now recognize this head of compensable damage. 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".[392] Finland's Act on Compensation for Environmental Damage also covers pure economic loss, except where such losses are insignificant. Chapter 32 of the Swedish Environmental Code also provides for pure economic loss. Pure economic loss not caused by criminal behaviour is compensable only to the extent that it is significant. Denmark's Act on Compensation for Environmental Damage covers economic loss and reasonable costs for preventive measures or for the restoration of the environment. On the other hand, the Environmental Liability Act of Germany does not cover pure economic loss.[393]

(9) Article 2 (*d*) (iii) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters and article 2 (2) (*d*) (iii) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal cover loss of income directly deriving from an economic interest in any use of the environment, incurred as a result of impairment of the environment, taking into account savings and costs. For purposes of the present draft principles, this type of damage is covered under subparagraph (iii).[394]

(10) *Subparagraph (ii)* also covers property which forms part of cultural heritage. State property includes national cultural heritage. It embraces a wide range of items, including monuments, buildings and sites, while "natural heritage" denotes natural features and sites and geological and physiological formations. Their values lie in their historical, artistic, scientific, aesthetic, ethnological, or anthropological importance or in their conservation or natural beauty. The Convention for the protection of the world cultural and natural heritage has a comprehensive definition of cultural heritage.[395] Not all

[390] *United States Code 2000 Edition containing the general and permanent laws of the United States, in force on January 2, 2001*, vol. 18, Washington D. C., United States Government Printing Office, 2001, p. 694.

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

[392] See footnote 390 above.

[393] See generally P. Wetterstein, "Environmental damage in the legal systems of the Nordic countries and Germany", in M. Bowman and A. Boyle, *Environmental Damage in International Law and Comparative Law: Problems of Definition and Valuation*, Oxford University Press, 2002, pp. 223–242.

[394] See also article I (1) (*k*) of the Vienna Convention on civil liability for nuclear damage as modified by article 2 (2) of the Protocol to amend the Convention, which defines nuclear damage as including "…each of the following to the extent determined by the law of the competent court; […] (v) loss of income deriving from an economic interest in any use or enjoyment of the environment, incurred as a result of a significant impairment of that environment, and insofar as not included in sub-paragraph (ii)". See also article 1 of the Convention on Supplementary Compensation for Nuclear Damage, which covers "each of the following to the extent determined by the law of the competent court: […] (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)"; and article I.B.vii) of the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982, which 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 sub-paragraph 2 above".

[395] 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;

(Continued on next page.)

civil liability regimes include aspects concerning cultural heritage under this head. For example, the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment includes in its definition of "environment", property which forms part of the cultural heritage.[396]

(11) Respecting and safeguarding cultural property are primary considerations in times of peace as well as in times of armed conflict. This principle is asserted in the Convention for the Protection of Cultural Property in the Event of Armed Conflict. Moreover, international humanitarian law prohibits commission of hostilities directed against historical monuments and works of art which constitute the cultural heritage of peoples.[397]

(12) *Subparagraph (iii)* is concerned with questions concerning damage to the environment *per se*. This is damage caused to the environment itself by the hazardous activity without relating the same in any way to the damage to persons or property. In the case of damage to the environment *per se*, it is not easy to establish standing. The environment does not belong to anyone. It is 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 not ordinarily have standing to pursue a claim in respect of damage to such property.[398] 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 hold such property in trust, and usually public authorities and more recently, public interest groups, have been given standing to pursue claims.[399]

(13) *Subparagraphs (iii)* to *(v)* deal with claims that are usually associated with damage to environment. *Paragraph (*b*)* deals with the definition of 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. The concept of harm to the environment is reflected in several liability regimes.[400] Environment could be defined in different ways for different purposes and it is good to bear in mind that there is no universally accepted 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.[401]

(14) *Paragraph (*b*)* defines "environment". 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 also to include in the definition the latter encompassing non-service values such aesthetic aspects of the landscape.[402] This includes the enjoyment of nature

(Footnote 395 continued.)

- groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;
- sites: works of man or the combined works of nature and of man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

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

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

[397] See article 53 of the Protocol additional to the Geneva Conventions of 12 August 1949, and relating to the protection of victims of international armed conflicts and article 16 of the Protocol additional to the Geneva Conventions of 12 August 1949, and relating to the protection of victims of non-international armed conflicts. See also the Hague Conventions respecting the Laws and Customs of War on Land, particularly Convention IV (articles 27 and 56 of the Regulations concerning the Laws and Customs of War on Land, in annex to Conventions II and IV of 1899 and 1907) and Convention IX concerning Bombardment by Naval Forces in Time of War (article 5), as well as the Second Protocol to the Hague Convention of 1954 for the Protection of Cultural Property in the Event of Armed Conflict.

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

[399] Under the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), United States Code Annotated, title 42, chapter 103, sections 9601 *et seq.*; the Clean Water Act of 1977, *ibid.*, title 33, chapter 26, section 1251; the Oil Pollution Act of 1990 (see footnote 390 above), sections 2701 *et seq*., the United States "Congress empowered government agencies with management jurisdiction over natural resources to act as trustees to assess and recover damages ... [t]he public trust is defined broadly to encompass 'natural resources'... belonging to, managed by, held in trust by, appertaining to or otherwise controlled by Federal, state or local governments or Indian tribes".

[400] See, for example, the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment (art. 2, para. 7 (*d*)); the Convention on the Transboundary Effects of Industrial Accidents (art. 1 (*c*)); the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (art. 1 (2)); the Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA) (art. 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) (art. 10 (*c*)); the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal (art. 2 (2) (*c*) (iv) and (v)); and the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters (art. 2 (*d*) (iv)–(v)).

[401] See the Communication from the Commission to the Council and Parliament and the Economic and Social Committee: Green Paper on remedying environmental damage, COM (93) 47 final, of 14 May 1993, p. 10. See also article 2 of Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (footnote 366 above).

[402] For a philosophical analysis underpinning a regime for damage to biodiversity, see M. Bowman, "Biodiversity, intrinsic value and the definition and valuation of environmental harm", in M. Bowman and A. Boyle, *op. cit.* (footnote 393 above), pp. 41–61. Article 2 of the Convention for the protection of the world cultural and natural heritage defines "natural heritage" as "natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view; geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation; natural sites or precisely

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.[403]

(15) Moreover, the Commission in taking such a holistic approach is, in the words of the ICJ in the *Gabčikovo-Nagymaros Project* case:

mindful that, in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage.[404]

(16) Furthermore, a broader definition would attenuate any limitation imposed under liability regimes on the remedial responses acceptable and is reflected in subparagraphs (iv) and (v).

(17) Thus, while the reference in *paragraph (*b*)* to "natural resources […] and the interaction" of its factors embraces the familiar concept of environment within a protected ecosystem,[405] the reference to "the characteristic aspects of the landscape" denotes an acknowledgement of a broader concept of environment.[406] The definition of natural resources includes living and non-living natural resources, including their ecosystems.

(18) *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. As noted in paragraph (9) above, 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.

(19) It may be noted that the reference 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 modern concepts. These elements of damage have gained recognition more recently because, as noted by one commentator, "there is a clear shift towards a greater focus on damage to the environment *per se*, rather than primarily on damage to persons and to property".[407] *Subparagraph (iv)* makes it clear that reasonable costs of measures of reinstatement are reimbursable as part of claims of compensation in respect of transboundary damage. 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. 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.[408]

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

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delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty".

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

[404] *Gabčikovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 7, at p. 77, para. 140. The Court in this connection also alluded to the need to keep in view the inter-generational and intra-generational interests and the contemporary demand to promote the concept of sustainable development.

[405] 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 article 1 (15) the Convention on the Regulation of Antarctic Mineral Resource Activities (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.

See also article 3, paragraph 1, of the Protocol on Environmental Protection to the Antarctic Treaty.

[406] Article 2 (10) of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment contains a non-exhaustive list of components of the environment which includes: "natural resources both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors; property which forms part of the cultural heritage; and the characteristic aspects of the landscape"; article 1 (c) of the Convention on the Transboundary Effects of Industrial Accidents refers to the adverse consequences of industrial accidents on "(i) [h]uman beings, flora and fauna; (ii) [s]oil, water, air and landscape; (iii) [t]he interaction between the factors in (i) and (ii); (iv) [m]aterial assets and cultural heritage, including historical monuments"; article 1 (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". See also article 2 of Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (footnote 366 above).

[407] L. de la Fayette, "The concept of environmental damage in international liability regimes", in M. Bowman and A. Boyle (eds.), *op. cit.* (footnote 393 above) pp. 149–189, at p. 167.

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

[Recoverable costs are costs] reasonably to be incurred [...] to restore or rehabilitate the environment in the affected area to its pre-existing condition, or as close thereto as is possible without grossly disproportionate expenditures. The focus in determining such a remedy should be [on] the steps a reasonable and prudent sovereign or agency would take to mitigate the harm done by the pollution, with attention to such factors as technical feasibility, harmful side effects, compatibility with or duplication of such regeneration as is naturally to be expected, and the extent to which efforts beyond a certain point would become either redundant or disproportionately expensive.[409]

(21) *Subparagraph (v)* includes costs of reasonable response measures as admissible claims of compensation in respect of transboundary damage. 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.[410] Such measures include any reasonable measures taken by any person including public authorities, following the occurrence of the transboundary damage, to prevent, minimize or mitigate possible loss or damage or to arrange for environmental clean-up. The measures of response must be reasonable.

(22) *Paragraph (*c*)* defines "transboundary damage". It refers to damage occurring in one State because of an accident or incident involving a hazardous activity in another State. This concept is based on the well-accepted notions of territory, jurisdiction and control of 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 concerned share a common border. This definition includes, for example, activities conducted under the jurisdiction or control of a State 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.

(23) The definition is intended to clearly demarcate and distinguish a State under whose jurisdiction and control an activity covered by these draft principles is conducted, from a State which has suffered the injurious impact. Different terms could be used for the purpose of the present principles. They include, as defined under the draft articles on prevention,[411] the "State of origin" (the State in the territory or otherwise under the jurisdiction or control of which the activities referred to in article 1 are carried out); and 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). In addition, the "State of injury" (the State in the territory or otherwise in places under the jurisdiction or control of which transboundary damage occurs); and the "States concerned" (the State of origin, the State likely to be affected; and the State of injury) might also be used. These terms have not been employed in the present draft principles, but have been used at different places in the commentary as appropriate.

(24) 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 of injury. 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 be made available for damage suffered in the State of origin. Article XI of the Convention on Supplementary Compensation for Nuclear Damage envisages such a system.

(25) *Paragraph (*d*)* defines "hazardous activity" by reference to any activity which has a risk of causing transboundary harm through physical consequences. The commentary to draft principle 1 above has explained the meaning and significance of the terms involved.

(26) *Paragraph (*e*)* defines "operator". The definition of "operator" is a functional one. A person must be in command or in control of the activity.

(27) There is no general definition of "operator" under international law. However, the term is employed in domestic law[412] and in treaty practice. In case of the latter, the nuclear damage regimes impose liability on the operator.[413] The definition of operator would vary, how-

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

[410] See, for example, article I, paragraph 1 (*k*) (vi) of the Vienna Convention on civil liability for nuclear damage as modified by article 2 (2) of the Protocol to amend the Convention: "the costs of preventive measures, and further loss or damage caused by such measures"; the Convention on Supplementary Compensation for Nuclear Damage, article 1 (*f*) (vi): "the costs of preventive measures, and further loss or damage caused by such measures"; and the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982, article I.B.vii): "the costs of preventive measures, and further loss or damage caused by such measures, in the case of subparagraphs 1 to 5 above, to the extent that the loss or damage arises out of or results from ionising radiation emitted by any source of radiation inside a nuclear installation, or emitted from nuclear fuel or radioactive products or waste". Article 1, paragraph 6 of the 1992 Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage, refers to costs of preventive measures and further loss or damage caused by preventive measures. See also article 2 (2) (c) (v) and (d) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal; article 2 (7) (*d*) and (9) of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment and article 2 (2) (*d*) (v) and (*h*) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters.

[411] See footnote 322 above.

[412] For domestic law, see, for example, the 1990 Oil Pollution Act (footnote 390 above), in which the following individuals may be held liable: (a) a responsible party such as the owner or operator of a vessel, onshore and offshore facility, deepwater port and pipeline; (b) the "guarantor", the "person other than the responsible party, who provides evidence of financial responsibility for a responsible party"; and (c) third parties (individuals other than those mentioned in the first two categories, their agents or employees or their independent contractors, whose conduct is the sole cause of injury). See also the United States Comprehensive Environmental Response, Compensation and Liability Act (footnote 399 above).

[413] See, for example, the Convention on third party liability in the field of nuclear energy and the Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982: "'operator' in relation to a nuclear installation means to the person designated or recognised by the

ever, depending upon the nature of the activity. The channelling of liability 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 Liability for Pollution Damage, the possibility existed to impose the liability on the ship owner, or the cargo owner, or both.[414] However under a compromise agreed, the ship owner was made strictly liable. 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.[415]

(28) The term "control" denotes power or authority to manage, direct, regulate, administer or oversee.[416] This could include 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.[417] It may also include a parent company or other related entity, whether corporate or not, if that entity has actual control of the operation.[418] 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.

(29) The phrase "at the time of the incident" is intended to establish a connection between the operator and the transboundary harm.

Principle 3

Objective

The present draft principles aim at ensuring prompt and adequate compensation to natural or legal persons, including States, that are victims of transboundary damage, including damage to the environment.

Commentary

(1) The main objective of the present draft principles is to provide compensation in a manner that is predictable, equitable, expeditious and cost-effective. The present draft principles also pursue other objectives. Among them are: (*a*) the provision of incentives to the operator and other relevant persons or entities to prevent transboundary damage from hazardous activities; (*b*) the promotion of cooperation among States to deal with issues concerning compensation in an amicable manner; and (*c*) the preservation and promotion of the viability of economic activities that are important to the welfare of States and peoples.

(2) The key objective of ensuring protection to victims suffering damage from transboundary harm through compensation has been an essential element from the inception of the topic by the Commission. In his schematic outline, Robert Q. Quentin-Baxter also focused on the need to protect victims, which required "measures of prevention that as far as possible avoid a risk of loss or injury and, in so far as that is not possible, measures of reparation" and that "an innocent victim should not be left to bear his loss or injury".[419] The former consideration is already addressed by the draft articles on prevention.[420]

(3) A formal definition of the term "victim" was not considered necessary but for purposes of the present draft principles the term includes natural and legal persons, including States as custodians of public property. This meaning is linked to and may be deduced from the definition of damage in draft principle 2, which includes

competent public authority as the operator of that installation" (common article 1 (vi)). See also the Vienna Convention on civil liability for nuclear damage (operator) (art. IV); the Protocol to amend the Vienna Convention on civil liability for nuclear damage (operator) (art. 1 (c)); and the Convention on the Liability of Operators of Nuclear Ships (operator of nuclear ships) (art. II). See also the Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD), which defines "carrier" with respect to inland navigation vessels as "the person who at the time of the incident controls the use of the vehicle on board which the dangerous goods are carried" (art. 1, para. 8); the International Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources defines the operator of a continental shelf installation to include in the absence of a designation by a Contracting Party "the person who is in overall control of the activities carried on at the installation" (art. 1, para. 3); and under the EU Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (footnote 366 above), 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.

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

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

[416] The definition of "shipowner" in the International Convention on Civil Liability for Bunker Oil Pollution Damage is broad. It includes "the registered owner, bareboat charterer, manager and operator of the ship" (art. 1, para. 2).

[417] See EU Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (footnote 366 above), article 2, paragraph 6.

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

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

[420] See footnote 322 above.

damage to persons, property or the environment.[421] A group of persons or communes could also be victims. In the *Matter of the people of Enewetak* 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 Enewetak 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.[422] 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 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.[423]

(4) The meaning of "victim" is also linked to the question of standing. Some liability regimes such as the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment and Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage provide standing to non-governmental organizations.[424] The Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters also gives standing to NGOs to act on behalf of public environmental interests. Victims may also be those designated under national laws to act as public trustees to safeguard those resources and hence 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.[425] 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. Norwegian law, for example, 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.

(5) 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:

> 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.[426]

(6) 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.[427]

(7) The need for prompt and adequate compensation should also be perceived from the perspective of achieving "cost internalization", which constituted the core, in its origins, of the "polluter pays" principle.[428] It is a principle that argues for internalizing the true economic costs of pollution control, clean-up and protection measures within the costs of the operation of the activity itself. It thus attempted to ensure that governments did not distort the costs of international trade and investment by subsidizing these environmental costs. The policy of OECD and the European Union endorses this. However, in implementation, the principle thus endorsed exhibits its own variations in different contexts. 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

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[421] In respect of the definition of victim under international criminal law, see for example 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 (art. 79).

[422] See ILM, vol. 39, No. 5 (September 2000), pp. 1214 *et seq*. 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 (*ibid.*, p. 1214).

[423] See *In the Matter of Oil Spill by the Amoco Cadiz off the coast of France on March 16, 1978, MDL Docket No. 376 NDIll. 1984, American Maritime Cases, 2123–2199*. See M. C. Maffei, "The compensation for ecological damage in the 'Patmos' case", in F. Francioni and T. Scovazzi (eds.), *International Responsibility for Environmental Harm*, London, Graham and Trotman, 1991, p. 381. See also *In the Matter of: Oil Spill by the Amoco Cadiz off the coast of France on March 16, 1978*, United States Court of Appeals for the Seventh Circuit, 954 F.2d 1279; 1992 U.S. App. LEXIS 833; 1992 AMC 913; 22 ELR 20835, 12 June 1991.

[424] See article 18 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment and article 12 of the Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (see footnote 366 above).

[425] P. Wetterstein, "A proprietary or possessory interest…", *loc. cit.* (footnote 373 above), pp. 50–51.

[426] See footnote 363 above.

[427] See footnote 353 above.

[428] See H. Smets, "Le principe pollueur-payeur, un principe économique érigé en principe de droit de l'environnement?", *Revue générale de droit international public*, vol. 97, 1993, pp. 339–364; and N. de Sadeleer, *Les principes du pollueur-payeur, de prévention et de précaution*, Bruxelles, Bruylant, 1999, p. 157 *et seq*.

the cost of pollution, with due regard to the public interest and without distorting international trade and investment.[429]

(8) In treaty practice, the principle has provided a basis for constructing strict liability regimes. This is the case with the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment which in the preamble notes "the desirability of providing for strict liability in this field taking into account the 'Polluter Pays' Principle". The Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters refers, in its preamble, to the "polluter pays" principle as "a general principle of international environmental law, accepted also by the parties to" the Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the Convention on the Transboundary Effects of Industrial Accidents.[430]

(9) Some national judicial bodies have also given recognition to the principle. For example, the Indian Supreme Court in *Vellore Citizens Welfare Forum* v. *Union of India and others*,[431] treating the principle as part of general international law, directed the Government of India to establish an authority to deal with the situation of environmental degradation due to the activities of the leather tannery industry in the state of Tamil Nadu. In that case, it was estimated that nearly 35,000 hectares of agricultural land in this tanneries belt became either partially or totally unfit for cultivation, and that the 170 types of chemicals used in the chrome tanning process had severely polluted the local drinking water. The Court fined each tannery 10,000 rupees, to be put into an environmental protection fund. It also ordered the polluting tanneries to pay compensation and made the Collector/District Magistrates of the state of Tamil Nadu responsible to collect the compensation to be assessed and levied by the authority to be established as directed by the Court.[432]

(10) However, in the arbitration between France and the Netherlands concerning the application of the Convention on the protection of the Rhine against pollution by chlorides, of 3 December 1976, and the Additional Protocol to the Convention on the protection of the Rhine against pollution by chlorides of 25 September 1991 (France/Netherlands), the Arbitral Tribunal took a different view when requested to consider the "polluter pays" principle in its interpretation of the Convention, although it was not expressly referred to therein. The Tribunal concluded, in its award dated 12 March 2004, that, despite its importance in treaty law, the "polluter pays" principle is not a part of general international law. Therefore, it did not consider it pertinent to its interpretation of the Convention.[433]

(11) In addition, it has been noted that it "is doubtful that whether it [the 'polluter pays' principle] has achieved the status of a generally applicable rule of customary international law, except perhaps in relation to states in the EC, the UNECE and the OECD".[434]

(12) The principle also 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 easily be quantified in monetary terms, such as wildlife, or which affect the quality of the environment without causing actual physical damage.[435]

(13) It has also 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

[429] 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.

[430] It also finds reference, for example, in the International Convention on oil pollution preparedness, response and cooperation, 1990; the Convention for the protection of the marine environment of the North-East Atlantic (OSPAR Convention); the Convention on the Protection of the Marine Environment of the Baltic Sea Area; the Convention on the protection of the Black Sea against pollution; the Convention on the Protection and Use of Transboundary Watercourses and International Lakes; the Convention on the Transboundary Effects of Industrial Accidents; the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment; and Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (see footnote 366 above).

[431] See *All India Reporter, 1996*, vol. 83, p. 2715.

[432] For a brief résumé of the *Vellore Citizens Welfare Forum* v. *Union of India and others* case (footnote 431 above), see D. Kaniaru, L. Kurukulasuriya and P. D. Abeyegunawardene (eds.), *Compendium of Summaries of Judicial Decisions in Environment Related Cases (with Special Reference to Countries in South Asia)*, Colombo, South Asia Co-operative Environment Program, 1997, p. 25. The Supreme Court of India in the subsequent case of *Andhra Pradesh Pollution Control Board II* v. *Prof. M. V. Nayudu (retired) and others* further elaborated on the obligations of prevention by emphasizing the principle of precaution (replacing the principle of assimilative capacity contained in the Stockholm Declaration (see footnote 363 above)), the burden of proof placed on the respondent and the principle of good governance, which includes the need to take necessary legislative, administrative and other actions (in this respect the Supreme Court relied on Special Rapporteur Pemmaraju Sreenivasa Rao's preliminary report on prevention of transboundary damage from hazardous activities (see footnote 343 above), paragraphs 103–104), *All India Reporter 1999*, vol. 86, p. 812. See also *Andhra Pradesh Pollution Control Board II* v. *Prof. M.V. Nayudu (retired) and others* for a reiteration of these principles, www.supremecourtofindia.nic.in.

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

[434] See Sands, *op. cit.* (footnote 403 above), p. 280, for an illustration of the flexible way in which this principle is applied in the context of OECD and EU.

[435] P. W. Birnie and A. E. Boyle, *International Law…, op. cit.* (footnote 358 above), pp. 93–94.

all cases".[436] It is suggested that 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".[437]

(14) Draft principle 3 also emphasizes that damage to the environment *per se* is actionable, requiring prompt and adequate compensation. As noted in the commentary to draft principle 2 above, such compensation may not only include monetary compensation to the claimant but certainly allow reimbursement of reasonable measures of restoration and response.

(15) In general terms, there has been a reluctance to accept liability for damage to the environment *per se* unless such damage is linked to persons or property as a result of damage to the environment.[438] This situation is changing incrementally.[439] In the case of damage to natural resources or the environment, there is a right of compensation or reimbursement for costs incurred by way of reasonable preventive, restoration or reinstatement measures. This is further limited in the case of some conventions to measures *actually* undertaken, excluding loss of profit from the impairment of the environment.[440]

(16) 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 to incur expenditures disproportionate to the results desired and such expenditures should be cost-effective. Subject to these considerations, if restoration or reinstatement of the environment is not possible, it is reasonable to introduce the equivalent of those components into the environment.[441]

(17) The State or any other public agency which steps in to undertake measures of restoration or response measures may recover the costs later for such operations from the operator. For example, such is the case under the Comprehensive Environmental Response, Compensation and Liability Act (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 Protection 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.[442]

Principle 4

Prompt and adequate compensation

1. Each State should take 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.

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[436] *Ibid.*, pp. 94–95. See also the survey prepared by the Secretariat of liability regimes relevant to the topic of international liability for injurious consequences arising out of acts not prohibited by international law (international liability in case of loss from transboundary harm arising out of hazardous activities) (footnote 352 above), chapter II.

[437] P. W. Birnie and A. E. Boyle, *International Law …*, *op. cit.* (footnote 358 above), p. 95. The authors noted that "reference to 'public interest' in Principle 16 [of the Rio Declaration] leaves ample room for exceptions […]. As adopted at Rio, the 'polluter pays' principle is neither absolute nor obligatory" (p. 93). They also noted that in the case of East European nuclear installations, "Western European Governments, who represent one large group of potential victims […] have funded the work needed to improve safety standards" (p. 94).

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

[439] For difficulties involved in claims concerning ecological damage and prospects, see the *Patmos* and the *Haven* cases. See generally A. Bianchi, "Harm to the environment in Italian practice: the interaction of international law and domestic law", in P. Wetterstein (ed.) (footnote 373 above), p. 103, at 113–129. See also Maffei, *loc. cit.* (footnote 423 above), p. 381, at 383–390; and D. Ong, "The relationship between environmental damage and pollution: Marine oil pollution laws in Malaysia and Singapore", in M. Bowman and A. Boyle (eds.), *op. cit.* (footnote 393 above), p. 191, at 201–204. See also Sands, *op. cit.* (footnote 403 above), at pp. 918–922. See also the 1979 *Antonio Gramsci* incident and the 1987 *Antonio Gramsci* incident, IOPC Fund, *Report on the Activities of the International Oil Pollution Compensation Fund during 1980*; *ibid., Annual Report 1989*, p. 26; and *ibid., Annual Report 1990*, p. 27. See also generally W. Chao, *Pollution from the Carriage of Oil by Sea: Liability and Compensation*, London, Kluwer, 1996, pp. 361–366: the IOPC Fund resolution No. 3 of 17 October 1980 did not allow the court to assess compensation to be paid by the Fund "on the basis of an abstract quantification of damage calculated in accordance with theoretical models" (FUND/A/ES.1/13, Annex I). In the *Amoco Cadiz* case (see footnote 423 above), the Northern District Court of Illinois ordered Amoco Oil Corporation to pay $85.2 million in fines—$45 million for the costs of the spill and $39 million in interest. It denied compensation for non-economic damage. It thus dismissed claims concerning lost image and ecological damage. 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" (Maffei, *loc. cit.* (footnote 423 above), p. 393). Concerning lost image, the Court observed that the plaintiffs' claim was compensable in measurable damage, to the extent that it could be demonstrated that this loss of image resulted in specific consequential harm to the commune by virtue of tourists and visitors who might otherwise have come staying away. Yet this is precisely the subject matter of the individual claims for damages by hotels, restaurants, campgrounds, and other businesses within the communes. As regards ecological damage, the Court dealt with problems of evaluating "the species killed in the intertidal zone by the oil spill" and observed that "this claimed damage is subject to the principle of *res nullius* and is not compensable for lack of standing of any person or entity to claim therefor", *ibid.*, at pp. 393–394. See also in the *Matter of the People of Enewetak* (footnote 422 above), before the Marshall Islands Nuclear Claims Tribunal. The Tribunal had an opportunity to consider whether restoration was an appropriate remedy for loss incurred by the people of the Enewetak atoll arising from nuclear tests conducted by the United States. It awarded clean-up and rehabilitation costs as follows: $22 million for soil removal; $15.5 million for potassium treatment; $31.5 million for soil disposal (causeway); $10 million for clean-up of plutonium; $4.51 million for surveys; and $17.7 million for soil rehabilitation and revegetation (pp. 1222–1223).

[440] See generally commentary to principle 2, above, paras. (8)–(9) and (18)–(21).

[441] For analysis of the definition of the environment and the compensable elements of damage to the environment, see the eleventh report on international liability for injurious consequences arising out of acts not prohibited by international law of the Special Rapporteur Julio Barboza (footnote 336 above), especially p. 57, para. 28. For an interesting account of the problem of damage, definition of harm, damage, adverse effects and damage valuation, see M. A. Fitzmaurice, "International protection of the environment", *Collected Courses of the Hague Academy of International Law, 2001*, The Hague, Martinus Nijhoff, vol. 293 (2002), p. 9 *et seq.*, at pp. 225–233.

[442] For an analysis of CERCLA, see W. D. Brighton and D. F. Askman, "The role of the government trustees in recovering compensation for injury to natural resources", in P. Wetterstein (ed.) (footnote 373 above), pp. 177–206, at pp. 183–184.

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 should 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 should also ensure that additional financial resources are allocated.

Commentary

(1) This draft principle reflects the important role of the State of origin in setting up a workable system for compliance with the requirement of "prompt and adequate compensation". The reference to "each State" in the present context is to the State of origin. The draft principle contains four interrelated elements: first, the State should establish a liability regime; second, any such liability regime should not require proof of fault; third, any conditions or limitations that may be placed on such liability should not erode the requirement of prompt and adequate compensation; and fourth, various forms of securities, insurance and industry funding should be created to provide sufficient financial guarantees for compensation. The five paragraphs of draft principle 4 express these four elements.

(2) *Paragraph 1* addresses the first requirement. It requires that the State of origin take necessary measures to ensure that prompt and adequate compensation is available for victims of transboundary damage caused by hazardous activities that take place within its territory or otherwise under its jurisdiction. The latter part of the paragraph reads "its territory or otherwise under its jurisdiction or control" and the terminology is the same as used in paragraph 1 (*a*) of article 6 of the draft articles on prevention of transboundary harm from hazardous activities, adopted by the Commission in 2001.[443] It is, of course, assumed that similar compensation would also be provided for damage within the State of origin from such incident.

(3) *Paragraph 2* addresses the second and third requirements. It provides that such a liability regime should not require proof of fault and any conditions or limitations to such liability should be consistent with draft principle 3, which highlights the objective of "prompt and adequate compensation". The first sentence highlights the "polluter pays" principle and provides that liability should be imposed on the operator or, where appropriate, other person or entity. The second sentence requires that such liability should not require proof of fault. The third sentence recognizes that it is customary for States and international conventions to subject liability to certain conditions or limitations. However, to ensure that such conditions and exceptions do not fundamentally alter the nature of the requirement to provide for prompt and adequate compensation, the point has been emphasized that any such conditions or exceptions should be consistent with the requirement of prompt and adequate compensation in draft principle 3.

(4) *Paragraph 3* provides that the measures provided by the State of origin should include the requirement that the operator or, where appropriate, another person or entity, establish and maintain financial security such as insurance, bonds or other financial guarantees to cover claims of compensation.

(5) *Paragraph 4* deals with industry funding at the national level. The words "these measures" reflect the point that the action a State is required to take would involve a collection of various measures.

(6) *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 allocated. As to the manner of ensuring financial security for prompt and adequate compensation, the last three paragraphs leave the State of origin free. The draft principle also requires 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 developments concerning technology and industry practices at home and elsewhere. Paragraph 5 does not require the State of origin to set up government funds to guarantee prompt and adequate compensation, but it provides that the State of origin should make sure that such additional financial resources are available.

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

(8) In addition, for the purpose of the present draft principles, as noted above, it is assumed that the State of origin has performed fully all the obligations that are incumbent upon it under draft articles on prevention, particularly draft article 3.[444] In the context of the present draft principles, the responsibility of the State for wrongful acts is not contemplated. This is, however, without prejudice to claims that may be made under the law of State responsibility and other principles of international law.

(9) In this connection, *paragraph 1* focuses on the requirement that the State should ensure payment of adequate and prompt compensation. The State itself is not obliged to pay compensation. The draft principle, in its present form, responds to and reflects a growing demand

[443] *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 156.

[444] *Ibid.*, p. 153.

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 make sure that adequate mechanisms are also available to respond to claims for compensation in case of any damage.

(10) As noted in the commentary to draft principle 3, 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 and principle 13 of the Rio Declaration.[445] While these principles are not intended to give rise to legally binding obligations, they demonstrate aspirations and preferences of the international community.[446]

(11) The underlying assumptions of the present draft principle could also be traced back to the *Trail Smelter* arbitration.[447] Even though in that case Canada took upon itself the obligation to pay the necessary compensation on behalf of the private company, the basic principle established in that case entailed a duty of a State to ensure payment of prompt and adequate compensation for any transboundary damage.

(12) *Paragraph 2* spells out the first important measure that ought to be taken by each State, namely the imposition of liability on the operator or, where appropriate, other person or entity. The commentary to draft principle 1 has already elaborated on the meaning of "operator". It is, however, worth stressing that liability in case of significant damage is channelled[448] to the operator of the installation. There are, however, other possibilities. 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, for example, the Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage. In other cases, liability is channelled through more than one entity. Under the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal, waste generators, exporters, importers and disposers are all potentially liable at different stages in the transit of waste. The real underlying principle is not that "operators" are always liable, but that the party with the most effective control of the risk at the time of the accident or the most effective ability to provide compensation is made primarily liable.

(13) Channelling of liability to the operator or a single person or entity is seen as a reflection of the "polluter pays" principle. However, it has, as explained in the commentary to draft principle 3 above, its own limitations and needs to be employed with flexibility. In spite of its impact on the current trend of States to progressively internalize the costs of polluting industries, the principle has not yet been widely seen as part of general international law.

(14) *Paragraph 2* also provides that liability should not be based on proof of fault. Hazardous and ultra-hazardous activities, the subject of the present principles, involve complex operations and carry with them certain inherent risks of causing significant harm. In such matters, it is widely recognized that proof of fault or negligence should not be required and that the person should be held liable even if all the necessary care expected of a prudent person has been discharged. Strict liability is recognized in many jurisdictions when assigning liability for inherently dangerous or hazardous activities.[449] In any case, the present proposition may be considered as a measure of progressive development of international law. Strict liability has been adopted as the basis of liability in several instruments; and among the recently negotiated instruments, it is provided for in article 4 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, article 4 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal and article 8 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment.

(15) There are several reasons for the adoption of strict liability. It relieves claimants of the burden of proof for risk-bearing activities involving relatively complex technical industrial processes and installations. 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.

(16) 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. This is an assumption, which may not always hold up. As these activities have been accepted

[445] See above footnotes 363 and 353, respectively. See also the Malmö Ministerial Declaration, adopted by the Governing Council of UNEP at its sixth special session, *Official Records of the General Assembly, fifty-fifth session, Supplement No. 25* (A/55/25), Annex I, decision SS.VI/1 of 31 May 2000 and the Programme for the Development and Periodic Review of Environmental Law for the First Decade of the Twenty-First Century (Montevideo Programme III), adopted by the UNEP Governing Council at its twenty-first special session, UNEP-E-GC21, decision 21/23 of 9 February 2001; and the Plan of Implementation of the World Summit on Sustainable Development, A/CONF.199/20, resolution 2 of 4 September 2002, Annex.

[446] Birnie and Boyle note that "[t]hese principles all reflect more recent developments in international law and state practice; their present status as principles of general international law is more questionable, but the evidence of consensus support provided by the Rio Declaration is an important indication of their emerging legal significance" (P. W. Birnie and A. E. Boyle, *International Law…, op. cit.* (footnote 358 above), p. 105).

[447] See footnote 204 above.

[448] According to Goldie, the nuclear liability conventions initiated the new trend of channelling liability back to the operator "no matter how long the chain of causation, nor how novel the intervening factors (other than a very limited number of exculpatory ones)" (L. F. E. Goldie, "Concepts of strict and absolute liability and the ranking of liability in terms of relative exposure to risk", *Netherlands Yearbook of International Law*, vol. 16 (see footnote 369 above), p. 196). On this point see also Goldie, "Liability for damage and the progressive development of international law", *The International and Comparative Law Quarterly*, vol. 14 (1965), p. 1189, at pp. 1215–1218.

[449] See the survey prepared by the Secretariat of liability regimes relevant to the topic of international liability for injurious consequences arising out of acts not prohibited by international law (international liability in case of loss from transboundary harm arising out of hazardous activities) (footnote 352 above), chapter I.

only because of their social utility and indispensability for economic growth, States may wish to consider at every opportune time, reviewing their indispensability by exploring more environmentally sound alternatives which are also at the same time less hazardous.

(17) Equally common in cases of strict liability is 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 but limited 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 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.[450]

(18) 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.

(19) 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.

(20) 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.[451] Some existing international instruments also provide for that kind of liability.[452]

(21) Limits are well known in the case of regimes governing oil pollution at sea and nuclear incidents. For example, under the Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage, the ship owner's maximum limit of liability is 59.7 million special drawing rights (art. 6); thereafter the IOPC Fund is liable to compensate for further damage up to a total of 135 million special drawing rights (including the amounts received from the owner), or in the case damage resulting from natural phenomena, 200 million special drawing rights.[453] Similarly, the Protocol to amend the Vienna Convention on civil liability for nuclear damage also prescribed appropriate limits for the operator's liability.[454]

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

(23) 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 in article 5 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous

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

[451] On joint and several liability, see L. Bergkamp, *Liability and Environment: Private and Public Law Aspects of Civil Liability for Environmental Harm in an International Context*, The Hague, Kluwer, 2001, pp. 298–306.

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

[453] See article V (1) of the International Convention on Civil Liability for Oil Pollution Damage as amended by the 1992 Protocol, article 4 of the International Convention on the establishment of an international fund for compensation for oil pollution damage, and article 6 of the Protocol of 1992 to amend the International Convention on the establishment of an international fund for compensation for oil pollution damage. Following the sinking of the *Erika* off the French coast in December 1999, the maximum limit was raised to 89.77 million special drawing rights, effective 1 November 2003. Under the 2000 amendments to the Protocol of 1992 to amend the International Convention on the establishment of an international fund for compensation for oil pollution damage, to enter into force in November 2003, the amounts have been raised from 135 million special drawing rights to 203 million special drawing rights. If three States contributing to the Fund receive more than 600 million tons of oil per annum, the maximum amount is raised to 300,740,000 special drawing rights, from 200 million special drawing rights. See also Sands, *op. cit.* (footnote 403 above), pp. 915–917.

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

Wastes and their Disposal and article 5 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters. In the case of operations involving highly complicated chemical or industrial processes or technology, fault liability could pose a serious burden of proof for the victims. The rights of victims 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.

(24) Strict liability may alleviate the burden 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. In those cases where fault liability is preferred, it may be noted that a negligence claim could be brought to recover compensation for injury if the plaintiff establishes that (*a*) the defendant owed a duty to the plaintiff to conform to a specified standard of care; (*b*) the defendant breached that duty; (*c*) the defendant's breach of duty proximately caused the injury to the plaintiff; and (*d*) the plaintiff suffered damage.

(25) Courts in different countries have applied the principle and notions of proximate cause, adequate causation, foreseeability and remoteness of the damage. This is a highly discretionary and unpredictable branch of law. Different countries have applied them 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 made in the fields of medicine, biology, biochemistry, statistics and other relevant fields. Given these reasons, it is suggested that it would seem difficult to include such tests in a more general analytical model on loss allocation.[455] All these matters, however, must be addressed by each State in constructing its liability regime.

(26) Even if a causal link is established, 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, property damage, which could be repaired or replaced, could be compensated on the basis of the value of the repair or replacement. But 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 with the property which has been damaged, the less certain that the right to compensation exists. The question has also arisen whether a pure economic loss involving a loss of a right of an individual to enjoy a public facility, but not involving a direct personal loss or injury to a proprietary interest, qualifies for compensation.[456] However, pure economic losses, such as the losses suffered by a hotel, are payable in Finland and in Sweden, for example, but not in some other jurisdictions.[457]

(27) *Paragraph 2* also addresses the question of conditions of exoneration. It is usual for liability regimes and domestic law providing for strict liability to specify a limited set of fairly uniform exceptions to the liability of the operator. A typical illustration of the exceptions to liability can be found in articles 8 and 9 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, article 3 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal or article 4 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters.[458] 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

[455] See P. Wetterstein, "A proprietary or possessory interest …", *loc. cit.* (footnote 373 above), at p. 40.

[456] *Ibid.*, p. 32.

[457] See J. M. van Dunné, "Liability for pure economic loss: rule or exception? A comparatist's view of the civil law—common law split on compensation of non-physical damage in tort law", *European Review of Private Law*, vol. 4 (1999), pp. 397–428. See also *Weller and Company and another* v. *Foot and Mouth Disease Research Institute*, United Kingdom, Queen's Bench, *The Law Reports 1966*, vol. 1, p. 569.

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

Exemptions are also referred to in article 6 of the Protocol to amend the Vienna Convention on civil liability for nuclear damage: under this Convention, no liability shall attach to an operator if he proves that the nuclear damage is directly due to an act of armed conflict, civil war or insurrection. See also article IV (3) of the Vienna Convention on civil liability for nuclear damage; article 9 of Protocol to amend the Convention on Third Party Liability in the field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982; article 3 (5) of the annex to the Convention on Supplementary Compensation for Nuclear Damage; and article 4 (1) the Directive 2004/35/CE of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage (footnote 366 above). The Directive also does not apply to activities whose main purpose is to serve national defence or international security. In accordance with article 4 (6), it also does not apply to activities whose sole purpose is to protect from natural disasters. For examples of domestic law, see the survey prepared by the Secretariat of liability regimes relevant to the topic of international liability for injurious consequences arising out of acts not prohibited by international law (international liability in case of loss from transboundary harm arising out of hazardous activities) (footnote 352 above), chapter III.

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.

(28) 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.

(29) If liability of the operator is excepted for any one of the above reasons, it does not however mean that the victim would be left alone to bear the loss. It is customary for States to make *ex gratia* payments, in addition to providing relief and rehabilitation assistance. Further, compensation would also be available from supplementary funding mechanisms. In the case of exemption of operator liability because of the exception concerning compliance with the public policy and regulations of the government, there is also the possibility to lay the claims of compensation against the State concerned.

(30) *Paragraph 3* identifies another important measure that the State should take. It should oblige the operator (or, where appropriate, another person or entity) to have sufficient funds at its disposal, not only to manage the hazardous activity safely and with all the care expected of a prudent person under the circumstances but also to be able to meet claims of compensation, in the event of an accident or incident. For this purpose, the operator may be required to possess necessary financial guarantees.

(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.[459] 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, States may be given some flexibility in requiring and arranging suitable financial and security guarantees.[460] An effective insurance system may also require wide participation by potentially interested States.[461]

(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".[462] Insurance coverage may also be available for clean-up costs.

(33) The experience gained in insurance markets which are developed in the United States can be quickly transferred to other markets, as the insurance industry is a growing global market. Article 14 of the EU Directive 2004/35/CE on environmental liability with regard to the prevention and remedying of environmental damage,[463] for example, provides that member States should 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 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 invoke under the law. Article 11 (3) of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters and article 14 (4) of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal provide for such possibilities. However, both Protocols allow States to make a declaration if they wish not to allow 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 a subordinate level of government in the case of a State with a federal system. All available schemes of allocation of loss envisage some sort of supplementary funding to meet claims of compensation

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

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

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

[462] 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, of 23 January 2002 (COM (2002) 17 final).

[463] See footnote 366 above.

in case the funds at the disposal of the operator are not adequate 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) The additional sources of funding could be created out of different accounts. The first one could be out of public funds, as part of the national budget. In other words, the State could take a share in the allocation of loss created by the damage. The second account is a common pool of funds created by contributions either from operators of the same category of dangerous activities or from entities for whose direct benefit the dangerous or hazardous activity is carried out. It is not often explicitly stated which pool of funds—the one created by operators or by the beneficiaries or by the State—would, on a priority basis, provide relief after the liability limits of the operator have been exhausted.

Principle 5

Response measures

With a view to minimizing any transboundary damage from an incident involving activities falling within the scope of the present draft principles, States, if necessary with the assistance of the operator, or, where appropriate, the operator, should take prompt and effective response measures. Such response measures should include prompt notification and, where appropriate, consultation and cooperation with all potentially affected States.

Commentary

(1) The importance of response action once an accident or incident has occurred, triggering significant damage, cannot be overstated. In fact, such measures are necessary to contain the damage from spreading, and should be taken immediately. This is done in most cases without wasting any time identifying the responsible person or the cause or fault that triggered the event. Draft principle 5 assigns to the State in question the responsibility of determining how such measures should be taken and by whom—whether by the State itself, the operator or some other appropriate person or entity. While no operational sequence as such is contemplated in the phrase “States, if necessary with the assistance of the operator, or where appropriate, the operator”, it is felt that it would be reasonable to assume that in most cases of transboundary damage the State would have a more prominent role. Such a role stems from the general obligation of States to ensure that activities within their jurisdiction and control do not give rise to transboundary harm. Moreover, the State would have the option of securing a reimbursement of costs of reasonable response measures. The drafting is also a recognition of the diplomatic nuances that are often present in such cases. On the other hand, the possibility of an operator, including a transnational corporation, being first to react, is not intended to be precluded.

(2) It is also common for the authorities of the State to respond immediately and evacuate affected people to places of safety and provide immediate emergency medical and other relief. It is for this reason that the principle recognizes the important role that the State plays 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.

(3) The envisaged role of the State under the present principle is complementary to the role assigned to it under draft articles 16 and 17 of the draft articles on prevention, which deal with the requirements of “emergency preparedness” and “notification of emergency”.[464]

(4) The present draft principle however should be distinguished and goes beyond those provisions. It deals with the need to take the necessary response action after the occurrence of an incident resulting in damage, but if possible before it acquires the character of transboundary damage. The State from which the harm originates is expected in its own interest and even as a matter of duty borne out of “elementary considerations of humanity”[465] to consult the States likely to be affected to determine the best possible response action to prevent or mitigate transboundary damage.[466] Various levels of interaction may be contemplated in the second sentence of the present draft principle, namely notification, consultation and cooperation. It is considered that the word “prompt” is more appropriate for “notification”, but may not be entirely suitable in an emergency situation in reference to “consultation” and “cooperation”, which are more consensual, guided by good faith and usually triggered upon request. It is viewed that “where appropriate” would adequately cover these requirements and is sufficiently flexible to include a wide range of processes of interaction depending on the circumstances of each case.

(5) Conversely, States likely to be affected are expected to extend to the State of origin their full cooperation. It is understood that the importance of taking response

[464] See the text of and commentaries to articles 16 and 17 of the draft articles on prevention in *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, pp. 168–169. For the view that the treaty obligations to maintain contingency plans and respond to pollution emergencies must be seen as part of a State’s duty of due diligence in controlling sources of known environmental harm, see P. W. Birnie and A. E. Boyle, *International Law …, op. cit.* (footnote 358 above), p. 137. The authors also note that “it is legitimate to view the *Corfu Channel* case as authority for a customary obligation to give warning of known environmental hazards” (p. 136).

[465] See *Corfu Channel* (footnote 179 above), p. 22. For reference to the particular concept as part of “obligations […] based […] on certain general and well-recognized principles” (*ibid.*), as distinguished from the traditional sources of international law enumerated in article 38 of the Statute of the International Court of Justice, see B. Simma, “From bilateralism to community interest in international law”, *Recueil des cours: Collected courses of the Hague Academy of International Law 1994-VI*, vol. 250 (1997), The Hague, Martinus Nijhoff, pp. 220 *et seq.*, at pp. 291–292.

[466] On the duty of States to notify and consult with each other with a view to take appropriate actions to mitigate damage, see principle 18 of the Rio Declaration (footnote 353 above); the Convention on the Transboundary Effects of Industrial Accidents; the Convention on Biological Diversity; and the Cartagena Protocol on Biosafety to the Convention on Biological Diversity; and the treaties in the field of nuclear accidents and the Convention on early notification of a nuclear accident. See also Sands, *op. cit.* (footnote 403 above), pp. 841–847.

measures applies also to States that have been, or may be, affected by the transboundary damage. These States should take such response measures as are within their power in areas under their jurisdiction to help prevent or mitigate such transboundary damage. 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.[467]

(6) Any measure that 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 an equal responsibility to maintain emergency preparedness and put into operation any such measures as soon as an incident occurred. The operator can and should give the State all the assistance it needs to discharge its responsibilities. Particularly, the operator is in the best position to indicate the details of the accident, its nature, the time of its occurrence and its exact location and the possible measures that parties likely to be affected could take to minimize the consequences of the damage.[468] In case the operator is unable to take the necessary response action, the State of origin should make necessary arrangements to take such action.[469] In this process it can seek necessary and available help from other States or competent international organizations.

Principle 6

International and domestic remedies

1. States should provide appropriate procedures to ensure that compensation is provided in furtherance of draft principle 4 to victims of transboundary damage from hazardous activities.

2. Such procedures may include recourse to international claims settlement procedures that are expeditious and involve minimal expenses.

3. To the extent necessary for the purpose of providing compensation in furtherance of draft principle 4, each State should ensure that its domestic administrative and judicial mechanisms possess the necessary competence and provide effective remedies to such victims. These mechanisms should not be less prompt, adequate and effective than those available to its nationals and should include appropriate access to information necessary to pursue such mechanisms.

Commentary

(1) Draft principle 6 indicates measures necessary to operationalize and implement the objective set forth in draft principle 4. *Paragraph 1* sets forth the requirement to ensure appropriate procedures for ensuring compensation applies to all States. This paragraph should be contrasted with paragraph 3, which particularizes the requirements contained therein to the State of origin.

(2) *Paragraph 2* is intended to bring more specificity to the nature of the procedures involved. 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.[470] These may include mixed claims commissions and negotiations for lump sum payments. The international component does not preclude possibilities whereby a State of origin may make a contribution to the State affected to disburse compensation through a national claims procedure established by the affected State. Such negotiations need not, unless otherwise desired, bar negotiations between the State of origin and the private injured parties and such parties and the person responsible for the activity causing significant damage. A lump sum compensation could be agreed either as a result of a trial or an out-of-court settlement.[471] Victims could be immediately given reasonable compensation on a provisional basis, pending a deci-

[467] In general, on the criterion of reasonableness in computing costs admissible for recovery, see P. Wetterstein, "A proprietary or possessory interest…", *loc. cit.* (footnote 373 above), pp. 47–50.

[468] States are required to notify such details in case of nuclear incidents. See article 2 of the Convention on early notification of a nuclear accident. They must also give the States likely to be affected, through the IAEA, other necessary information to minimize the radiological consequences. See also Sands, *op. cit.* (footnote 403 above), pp. 845–846.

[469] Under articles 5 and 6 of the Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage (footnote 366 above), 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.

[470] 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 $2 million, see Whiteman, *op. cit.* (footnote 127 above), p. 565. See also E. Margolis, "The hydrogen bomb experiments and international law", *The Yale Law Journal*, vol. 64, No. 5 (April 1955), pp. 629–647, at pp. 638–639. The Union of Soviet Socialist Republics paid Can$3 million by way of compensation to Canada following the crash of Cosmos 954 in January 1978, Sands, *op. cit.* (footnote 403 above), p. 887. See also ILM, vol. 18 (1979), p. 907. The author also noted that although several European States paid compensation to their nationals for damage suffered due to the Chernobyl nuclear accident, they did not attempt to make formal claims for compensation, even while they reserved their right to do so, *ibid.*, pp. 886–889. Mention may also be made of the draft articles 21 and 22 adopted by the Working Group on international liability for injurious consequences arising out of acts not prohibited by international law created by the Commission. These draft articles were included in the Working Group's report to the Commission. 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. Article 22 referred to several factors that States may wish to consider for arriving at the most equitable quantum of compensation (see *Yearbook ... 1996*, vol. II (Part Two), Annex I, at pp. 131–132.

[471] 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 courts first but on grounds of *forum non-conveniens* the matter was litigated before the Supreme Court of India. The Bhopal Gas Leak disaster (Processing of Claims) Act, 1985 provides the basis for the consolidation of claims. The Supreme Court of India in the *Union Carbide Corporation* v. *Union of India and others* 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 (see *All India Reporter 1990*, vol. 77, pp. 273 *et seq.*). The original claim of the Government of India was over $1 billion.

sion on the admissibility of claim and the actual extent of payable compensation. National claims commissions or joint claims commissions established for this purpose could examine the claims and settle the final payments of compensation.[472]

(3) The United Nations Compensation Commission[473] may offer itself as a useful model for some of the procedures envisaged under paragraph 2. In this case, the victims are authorized to have recourse to the international procedure set up without being obliged to exhaust domestic remedies. This is of a nature to enable settlement of claims within a short time frame.

(4) The Commission is aware of the heavy costs and expenses involved in pursuing claims on the international plane. It is also aware that some international claims take a long time to be resolved. The reference to procedures that are expeditious and involving minimal expenses is intended to reflect the desire not to overburden the victim with a lengthy procedure akin to a judicial proceeding which may act as a disincentive.

(5) *Paragraph 3* focuses on domestic procedures. The obligation has been particularized to address the State of origin. It is an equal right of access provision. It is based on the presumption that right of access can only be exercised if there is an appropriate system in place for the exercise of the right. The first sentence of paragraph 3 therefore deals with the need to confer the necessary competence upon both the administrative and the judicial mechanisms. Such mechanisms should be able to entertain claims concerning activities falling within the scope of the present principles. The first sentence emphasizes the importance of ensuring effective remedies. It stresses the importance of removing hurdles in order to ensure participation in administrative hearings and proceedings. The second sentence deals with two aspects of the equal right of access. It emphasizes the importance of procedural non-discriminatory standards for determination of claims concerning hazardous activities. And, secondly, it deals with equal access to information. The reference to "appropriate" access 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 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 costs.

(6) The access to national procedures to be made available in the case of transboundary damage should be similar to those that a State provides under national law to its own nationals. It may be recalled that article 16 of the draft articles on prevention provides for a similar obligation for States in respect of the claims which may arise during the phase of prevention, a phase in which States are obliged to manage the risk involved in the hazardous activities with all due diligence.[474] A similar provision covering claims of compensation in respect of injury actually suffered, despite all best efforts to prevent damage, can be found in article 32 of the Convention on the Law of the Non-Navigational Uses of International Watercourses.

(7) The right of recourse is a principle based on non-discrimination and equal access to national remedies. For all its disadvantages, in providing access to information, and in ensuring appropriate cooperation between the relevant courts and national authorities across national boundaries, the principle does go beyond the requirement that States meet a minimum standard of effectiveness in the availability of remedies for transboundary claimants. This principle is also reflected in principle 10 of the Rio Declaration,[475] and in principle 23 of the World Charter for Nature.[476] It is also increasingly recognized in national constitutional law regarding protection of the environment.[477]

(8) Paragraph 3 does not alleviate or resolve problems concerning choice of law, which is, given the diversity and lack of any consensus among States, a significant obstacle to delivering prompt, adequate and effective judicial recourse and remedies to victims,[478] particularly if they are poor and not assisted by expert counsel in the field. In spite of these disadvantages, it is still a step in the right direction and may even be regarded as essential. States could move the matters forward by promoting harmonization of laws and by agreeing to extend such access and remedies.

(9) Under the Convention concerning judicial competence and the execution of decisions in civil and commercial matters, remedies may be made available in the courts of a party only where: (*a*) the damage was suffered; (*b*) the operator has his or her habitual residence; or (*c*) the operator has his or her principal place of business. Article 19 of the Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, article 17 of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal and article 13 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters provide for a similar choice of forums.

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[472] 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 and 1958, see *In the Matter of the people of Enewetak* (footnote 422 above).

[473] Established pursuant to Security Council resolution 687 (1991) of 3 April 1991. See also Security Council resolutions 674 (1990) of 29 October 1990 and 692 (1991) of 20 May 1991, and the Report of the Secretary-General pursuant to paragraph 19 of Security Council resolution 687 (1991) (S/22559). On the procedure adopted by the United Nations Compensation Commission, see M. Kazazi, "Environmental damage in the practice of the UN Compensation Commission", in M. Bowman and A. Boyle (eds.), *op. cit.* (footnote 393 above), pp. 111–132.

[474] *Yearbook ... 2001*, vol. II (Part Two) and corrigendum, p. 168.

[475] See footnote 353 above.

[476] Resolution 37/7 of the General Assembly, of 28 October 1982, Annex.

[477] See K. W. Cuperus and A. E. Boyle, "Articles on private law remedies for transboundary damage in international watercourses", in International Law Association, *Report of the Sixty-seventh Conference, Helsinki, 12–17 August 1996*, London, 1996, pp. 403 *et seq.*, at p. 407.

[478] *Ibid.*, at p. 406.

Principle 7

Development of specific international regimes

1. States should cooperate in the development of appropriate international agreements on a global, regional or bilateral basis in order to make arrangements regarding the prevention and response measures to be followed in respect of particular categories of hazardous activities as well as the compensation and financial security measures to be taken.

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

Commentary

(1) Draft principle 7 corresponds to the set of provisions contained in draft principle 4, except that they are intended to operate at the international level. *Paragraph 1* encourages States to cooperate in the development of international agreements on a global, regional or bilateral basis in three areas: to make arrangements for prevention; to make arrangements for response measures in case of an accident with regard to specific categories of hazardous activities in order to minimize transboundary damage; and finally to make arrangements for compensation and financial security measures to secure prompt and adequate compensation.

(2) *Paragraph 2* encourages States to cooperate in setting up, at the international level, various financial security systems whether through industry funds or State funds in order to make sure that victims of transboundary damage are provided with sufficient, prompt and adequate remedy. *Paragraph 2* is also a recognition that regardless of what States may have to do domestically to comply with response measures and compensation, a more secure and consistent pattern of practice in this area requires international arrangements as well. This principle 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 categories 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] According to this view the term liability entailed "a negative asset, an obligation, in contra-distinction to a right",[480] and accordingly it referred not only to the consequences of the infringement of an obligation but rather to the obligation itself. This topic thus viewed was to address primary responsibilities of States, while taking into consideration the existence and reconciliation of "legitimate interests and multiple factors".[481] Such effort was further understood to include a duty to develop not only principles of prevention as part of a duty of due and reasonable care but also providing for an adequate and agreed framework for compensation as a reflection of the application of equitable principles. This is the philosophy that permeated the whole scheme and it is most appropriately designated as a scheme of "shared expectations"[482] with "boundless choices" for States.[483]

Principle 8

Implementation

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

2. The present draft principles and any implementing provisions should 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 consistent with their obligations under international law.

Commentary

(1) Draft principle 8 restates what is implied in the other draft principles, namely that each State should

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

[480] *Ibid.*, para. 12.

[481] *Ibid.*, p. 258, para. 38.

[482] The "shared expectations" are those that "(a) have been expressed in correspondence or other exchanges between the States concerned or, in so far as there are no such expressions, (b) can be implied from common legislative or other standards or patterns of conduct normally observed by the States concerned, or in any regional or other grouping to which they both belong, or in the international community" (third report on international liability for injurious consequences arising out of acts not prohibited by international law, by Mr. Robert Q. Quentin-Baxter, Special Rapporteur, *Yearbook ... 1982*, vol. II (Part One), document A/CN.4/360, p. 63, schematic outline, Section 4, para. 4). On the nature of the "shared expectations", Barboza explained that they "have a certain capacity to establish rights. This falls within the purview of the principle of good faith, of estoppel, or what is known in some legal systems as the doctrine of 'one's own acts'" (second Report on international liability for injurious consequences arising out of acts not prohibited by international law, by Mr. Julio Barboza, Special Rapporteur, *Yearbook ... 1986*, vol. II (Part One), document A/CN.4/402, p. 150, para. 22).

[483] Preliminary report on international liability for injurious consequences arising out of acts not prohibited by international law (see footnote 479 above), p. 261, para. 48.

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. *Paragraph 2* emphasizes that these draft principles and any implementing provisions should be applied without any discrimination on any grounds. The emphasis on "any" is to note that discrimination on any ground is not valid. The references to nationality, domicile or residence are retained to illustrate some relevant examples, which are common and relevant as the basis of such discrimination, in the context of settlement of claims concerning transboundary damage.

(2) *Paragraph 3* is a general clause, which provides that States should cooperate with each other to implement the present draft principles consistent with their obligations under international law. This provision is drawn on the basis of article 8 of the Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters. The importance of implementation mechanisms cannot be overemphasized. From the perspective of general and conventional international law, it operates at the international plane essentially as between States and it entails being implemented at the national level through specific domestic constitutional and other legislative techniques. Article 26 of the 1969 Vienna Convention states the fundamental principle *pacta sunt servanda*. Article 27 of the same Convention makes the well-known point that States cannot invoke their domestic law or the lack of it as a justification for its failure to perform the treaty obligations.[484] It is important that States enact suitable domestic legislation to implement these principles, lest victims of transboundary damage be left without adequate recourse.

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[484] See A. Aust, *Modern Treaty Law and Practice*, Cambridge University Press, 2000, pp. 143–161, at p. 144. On the implementation of international decisions at the national level, there is considerable literature, dealing with the experience of different countries (see *Collection of Essays by Legal Advisers of States, Legal Advisers of International Organizations and Practitioners in the Field of International Law* (United Nations publication, Sales No. E/99.V.13), chap. III, pp. 165–219.