INTERNATIONAL LIABILITY FOR INJURIOUS CONSEQUENCES ARISING OUT OF ACTS NOT PROHIBITED BY INTERNATIONAL LAW (PREVENTION OF TRANSBOUNDARY DAMAGE FROM HAZARDOUS ACTIVITIES)

[Agenda item 3]

DOCUMENT A/CN.4/487 and Add.1

First report on prevention of transboundary damage from hazardous activities, by Mr. Pemmaraju Sreenivasa Rao, Special Rapporteur

[*Original: English*]
[*18 March 1998*]

CONTENTS

Multilateral instruments cited in the present report

	Source
Treaty establishing the European Economic Community (Treaty of Rome) (Rome, 25 March 1957)	United Nations, *Treaty Series*, vol. 298, p. 3.
Convention for the Protection of World Cultural and Natural Heritage (Paris, 16 November 1972)	Ibid., vol. 1037, p. 151.
Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington, D.C., 3 March 1973)	Ibid., vol. 993, p. 243.
Convention for the Prevention of Marine Pollution from Land-based Sources (Paris, 4 June 1974)	Ibid., vol. 1546, p. 103.
Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona, 16 February 1976)	Ibid., vol. 1102, p. 27.
Convention on the Conservation of Nature in the South Pacific (Apia, 12 June 1976)	UNEP, *Selected Multilateral Treaties in the Field of the Environment* (Cambridge, 1991), vol. 2, p. 463.
Convention on the prohibition of military or any other hostile use of environmental modification techniques (New York, 10 December 1976)	United Nations, *Treaty Series*, vol. 1108, p. 151.

	Source
Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution (Kuwait, 24 April 1978)	Ibid., vol. 1140, p. 133.
Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 19 September 1979)	Ibid., vol. 1284, p. 209.
Convention on Long-Range Transboundary Air Pollution (Geneva, 13 November 1979)	Ibid., vol. 1302, p. 217.
United Nations Convention on the Law of the Sea (Montego Bay, 10 December 1982)	Ibid., vol. 1833, p. 3.
Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena de Indias, 24 March 1983)	Ibid., vol. 1506, p. 157.
Vienna Convention for the Protection of the Ozone Layer (Vienna, 22 March 1985)	Ibid., vol. 1513, p. 293.
ASEAN Agreement on the Conservation of Nature and Natural Resources (Kuala Lumpur, 9 July 1985)	UNEP, *Selected Multilateral Treaties in the Field of the Environment* (Cambridge, 1991), vol. 2, p. 343.
Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System (Harare, 28 May 1987)	*International Legal Materials* (Washington, D.C.), vol. XXVII, No. 5 (September 1988), p. 1109.
Single European Act (Luxembourg, 17 February 1986 and The Hague, 28 February 1986)	United Nations, *Treaty Series*, vol. 1754, p. 3.
Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal, 16 September 1987)	Ibid., vol. 1522, p. 3.
Convention on the Regulation of Antarctic Mineral Resource Activities (Wellington, 2 June 1988)	*International Legal Materials* (Washington, D.C.), vol. XXVII, No. 4 (July 1988), p. 859.
Basel Convention on the control of transboundary movements of hazardous wastes and their disposal (Basel, 22 March 1989)	United Nations, *Treaty Series*, vol. 1673, p. 57.
International Convention on Oil Pollution Preparedness, Response and Cooperation (London, 30 November 1990)	Ibid., vol. 1891, p. 51.
Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (Bamako, 30 January 1991)	Ibid., vol. 2101, p. 177.
Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 25 February 1991)	Ibid., vol. 1989, p. 309.
Protocol to the Antarctic Treaty on Environmental Protection (Madrid, 4 October 1991)	*International Legal Materials* (Washington, D.C.), vol. XXX, No. 6 (November 1991), p. 1461.
Treaty on European Union (Maastricht Treaty) (Maastricht, 7 February 1992)	United Nations, *Treaty Series*, vol. 1757, p. 3.
Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki, 17 March 1992)	Ibid., vol. 1936, p. 269.
Convention on the Transboundary Effects of Industrial Accidents (Helsinki, 17 March 1992)	Ibid., vol. 2105, p. 457.
Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki, 9 April 1992)	Ibid, vol. 2099, p. 195.
United Nations Framework Convention on Climate Change (New York, 9 May 1992)	Ibid., vol. 1771, p. 107.

	Source
Convention on biological diversity (Rio de Janeiro, 5 June 1992)	Ibid., vol. 1760, p. 79.
Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (Lugano, 21 June 1993)	Council of Europe, *European Treaty Series*, No. 150.
Convention on the Law of the Non-navigational Uses of International Watercourses (New York, 21 May 1997)	*Official Records of the General Assembly, Fifty-first Session, Supplement No. 49*, resolution 51/229, annex.

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Introduction

1. The topic of international liability for injurious consequences arising out of acts not prohibited by international law was placed on the agenda of the International Law Commission at its thirtieth session in 1978.[1] That same year, Mr. Robert Q. Quentin-Baxter was appointed Special Rapporteur for the topic. By 1984, he had submitted five reports[2] to the Commission, which sought to develop a conceptual basis for the topic. An effort was made to identify the boundaries of the new topic and distinguish it from the topic of State responsibility, which had been under consideration by the Commission for some time. A distinct contribution by Mr. Quentin-Baxter was to propose a schematic outline in his third report in 1982.[3] Before his untimely death in 1985, he submitted his fifth report containing five draft articles[4] which, however, were not referred to the Drafting Committee.

2. At its thirty-seventh session, in 1985, the Commission appointed Mr. Julio Barboza Special Rapporteur for the topic. Between 1985 and 1996, Mr. Barboza submitted 12 reports.[5] During this process he carried further the

[1] Pursuant to General Assembly resolution 32/151 of 19 December 1977, the Commission, at its thirtieth session in 1978, established a Working Group to consider the scope and nature of the topic (see *Yearbook ... 1978*, vol. II (Part Two), pp. 150–152).

[2] (*a*) Preliminary report: *Yearbook ... 1980*, vol. II (Part One), p. 247, document A/CN.4/334 and Add.1 and 2;

(*b*) Second report: *Yearbook ... 1981*, vol. II (Part One), p. 103, document A/CN.4/346 and Add.1 and 2;

(*c*) Third report: *Yearbook ... 1982*, vol. II (Part One), p. 51, document A/CN.4/360;

(*d*) Fourth report: *Yearbook ... 1983*, vol. II (Part One), p. 201, document A/CN.4/373; and

(*e*) Fifth report: *Yearbook ... 1984*, vol. II (Part One), p. 155, document A/CN.4/383 and Add.1.

[3] The third report (see footnote 2 above) consisted of two chapters: one set out a schematic outline of the topic and the other analysed the relationship between the schematic outline and the underlying principles discussed both in the Commission and in the Sixth Committee.

[4] Fifth report (see footnote 2 above), pp. 155–156, para. 1.

[5] (*a*) Preliminary report: *Yearbook ... 1985*, vol. II (Part One), p. 97, document A/CN.4/394;

(*b*) Second report: *Yearbook ... 1986*, vol. II (Part One), p. 145, document A/CN.4/402;

(*c*) Third report: *Yearbook ... 1987*, vol. II (Part One), p. 47, document A/CN.4/405;

(*d*) Fourth report: *Yearbook ... 1988*, vol. II (Part One), p. 251, document A/CN.4/413;

(*e*) Fifth report: *Yearbook ... 1989*, vol. II (Part One), p. 131, document A/CN.4/423;

(*f*) Sixth report: *Yearbook ... 1990*, vol. II (Part One), p. 83, document A/CN.4/428 and Add.1;

basic approach and outline developed by Mr. Quentin-Baxter. From 1988 onwards, specific articles were placed before the Drafting Committee for consideration. While several draft articles were developed,[6] in 1992 at its forty-fourth session 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.[7] On the basis of the recommendations of the Working Group, the Commission took a number of decisions.[8] As regards the scope of the topic:

(*a*) The Commission noted that, in the last several years of its work on the topic, it had identified the broad area and the outer limits of the topic but had not yet made a final decision on its precise scope. In the view of the Commission, such a decision might be premature. The Commission, however, agreed that, in order to facilitate progress on the subject, it would be prudent to approach its consideration within that broad area in stages and to establish priorities for issues to be covered;

(*b*) Within the understanding set forth in subparagraph (*a*) above, the Commission decided that the topic should be understood as comprising issues of both prevention and remedial measures. However, prevention should be considered first; only after having completed its work on that first part of the topic would the Commission proceed to the question of remedial measures. Remedial measures in that context might include those designed for mitigation of harm, restoration of what had been harmed and compensation for harm caused;

(*c*) Attention should be focused at first on drafting articles in respect of activities having a risk of causing transboundary harm and the Commission should not deal, at that stage, with other activities which in fact caused harm. In view of the recommendation contained in subparagraph (*b*) above, the articles should deal first with preventive measures in respect of activities creating a risk of causing transboundary harm and then with articles on the remedial measures when such activities have caused transboundary harm. Once the Commission had completed consideration of the proposed articles on those two aspects of activities having a risk of causing transboundary harm, it would then decide on the next stage of the work.

3. In 1994 and 1995, at its forty-sixth and forty-seventh sessions, the Commission provisionally adopted several articles on first reading.[9]

4. At its forty-eighth session, in 1996, the Commission established a working group to review the topic in all its aspects in the light of the various reports submitted by the Special Rapporteur and the discussions it had held over the years.[10] In addition to those reports, the Commission had before it a survey prepared by the Secretariat on liability regimes relevant to the topic.[11] The Secretariat had also prepared a survey in 1985 for the thirty-seventh session on State practice relevant to the topic.[12]

5. The report of the Working Group on international liability for injurious consequences arising out of acts not prohibited by international law contained a complete picture of the topic relating to the principles of prevention and of liability for compensation or other relief along with draft articles and commentaries thereto. The Commission was not able to examine the draft articles thus presented, but they were annexed to the report of the Commission to the General Assembly on the work of its forty-eighth session in 1996.[13]

6. Pursuant to General Assembly resolution 51/160 of 15 December 1996, the Commission at its forty-ninth session in 1997 established a working group to consider the manner in which the topic could be further studied and to make recommendations thereon.[14] The Working Group reviewed the work of the Commission on the topic since 1978. It noted that the scope and content of the topic remained unclear owing to such factors as conceptual and theoretical difficulties, the question of the appropriateness of the title and the relation of the subject to the topic of State responsibility.[15]

(*g*) Seventh report: *Yearbook ... 1991*, vol. II (Part One), p. 71, document A/CN.4/437;

(*h*) Eighth report: *Yearbook ... 1992*, vol. II (Part One), p. 59, document A/CN.4/443;

(*i*) Ninth report: *Yearbook … 1993*, vol. II (Part One), p. 187, document A/CN.4/450;

(*j*) Tenth report: *Yearbook … 1994*, vol. II (Part One), p. 129, document A/CN.4/459;

(*k*) Eleventh report: *Yearbook … 1995*, vol. II (Part One), p. 51, document A/CN.4/468; and

(*l*) Twelfth report: *Yearbook … 1996*, vol. II (Part One), p. 29, document A/CN.4/475 and Add.1.

[6] *Yearbook ... 1992*, vol. II (Part One), document A/CN.4/443, pp. 61–62, paras. 3–8.

[7] Ibid., vol. II (Part Two), p. 51, paras. 341–343.

[8] Ibid., paras. 344–349.

[9] Articles 1 and 2 and 11 to 20 were adopted in 1994 (see *Yearbook ... 1994*, vol. II (Part Two), p. 154, para. 360, and pp. 158–178, para. 380). Articles A to D were adopted in 1995 (*Yearbook…1995*, vol. II (Part Two), pp. 91–99).

[10] *Yearbook … 1996*, vol. II (Part Two), p. 78, para. 97.

[11] *Yearbook … 1995*, vol. II (Part One), p. 61, document A/CN.4/471, Survey of liability regimes relevant to the topic "International liability for injurios consequences arising out of acts not prohibited by international law".

[12] *Yearbook … 1985*, vol. II (Part One) (Addendum), p. 1, document A/CN.4/384, Survey of State practice relevant to international liability for injurious consequences arising out of acts not prohibited by international law.

[13] *Yearbook …1996*, vol. II (Part Two), annex I, pp. 100–132.

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

[15] Ibid., para. 165. It has also been observed that, while international practice shows that States now accept a general principle of responsibility for environmental harm, "there still remain many uncertainties as to the exact content and the limits of such a principle", including the legal basis and the form of international responsibility for environmental harm. At least three different forms or regimes of responsibility for a wrongful act and one regime of liability for acts which are not wrongful or prohibited have been identified: fault responsibility, responsibility without fault or objective responsibility, objective and relative responsibility or objective and absolute responsibility, and finally liability for acts which are not wrongful or prohibited. See, for an examination of these and other issues, Pisillo-Mazzeschi, "Forms of international responsibility for environmental harm", pp. 15–17. See also Kiss and Shelton, *International Environmental Law*, pp. 350–360. The authors note that, "[a]mong the various elements required to establish liability—causality, identifying the wrongdoer, proof and measurement

(*Continued on next page.*)

7. As to the two aspects of the topic, "prevention" and "international liability", the Working Group felt that they were distinct from one another, though related. Accordingly, it proposed that issues of prevention and liability should be dealt with separately. Noting further that several draft articles on prevention had been provisionally adopted by the Commission, the Working Group recommended the completion of the first reading of the draft articles on prevention in the following few years. It was also the view of the Working Group that any decision on the form and nature of the draft articles on prevention should be decided at a later stage.[16]

8. It may also be noted that a view was expressed in the Working Group that the Commission should retain the subject of international liability. However, it was agreed that the Commission would need to await further comments from Governments before it could take any decision on the issue. It was further noted that the title of the topic might need adjustment depending on the scope and content of the draft articles. Accordingly, the Commission decided in 1997 to proceed with its work on the topic, concentrating first on matters concerning prevention under the subtitle "Prevention of transboundary damage from hazardous activities".[17]

(*Footnote 15 continued.*)

of harm—an issue common to domestic and international environmental law is determining the *legal basis or degree of fault necessary to impose liability*" (ibid., p. 350). During the last two decades, there has been a proliferation of scholarly literature on the subject of international liability. Reviewing this literature, the editors of the *Harvard Law Review* noted that, nevertheless, no operational system for adjudicating liability had emerged. Further, in their view, the scant international environmental case law that did exist possessed little precedential value because the cases had been decided not on environmental liability grounds but rather on narrow mootness or treaty grounds. Thus, neither scholars nor international judges could legitimately rely upon these cases to generate more specific liability rules. Accordingly, no legitimate expectations about the consequences of action or inaction to prospective environmentally injurious States could be communicated. Thus, the principle *sic utere tuo ut alienum non laedas* "remains an abstraction, an empty concept that commentators hope to fill with substantive content, preferably content bearing the imprimatur of the United Nations or some other international organization". According to the editors, "[t]he challenge for the publicists, then, lies in the promulgation of an international liability regime that so advances the interests of states that nations will surrender some of their sovereign rights to participate in the system" (Guruswamy, Palmer and Weston, *International Environment Law and World Order: A Problem-Oriented Coursebook*, pp. 330–332). See also, on the essential modesty of customary law, Brownlie, "A survey of international customary rules of environmental protection".

[16] *Yearbook … 1997*, vol. II (Part Two), p. 59, para. 166.

[17] Ibid., para. 168.

PART ONE. THE CONCEPT OF PREVENTION AND SCOPE OF THE DRAFT ARTICLES

CHAPTER I

Consideration of the topic of international liability during the fifty-second session of the General Assembly

A. General observations

9. The Commission's decision to continue work on the topic was welcomed. It was stated that there was a growing need for clear rules limiting the nature of the discretion with which States interpreted and complied with certain obligations, especially those aimed at ensuring that activities carried out in areas under their jurisdiction or control did not cause damage to other States or to areas beyond the limits of their national jurisdiction. It was regrettable that only modest advances had been made, owing to the reluctance of States to contribute to the definition of the scope of a regime of liability for such activities. Reference was made to principle 22 of the Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration)[18] reflected in many later international instruments which imposed on States the obligation to cooperate in developing that area of law. It was stated that steps should be taken to put that obligation into effect. It was further stated that international law dealing with the subject was constantly evolving and had major significance at the dawn of the twenty-first century.[19] In the modern world, the failure to prevent damage to the environment could have serious consequences. The current understanding was that the world did not have an inexhaustible supply of natural resources and that sustainable development must be promoted. Those who contributed to the codification and progressive development of international law in that field could not neglect the issue.

B. The Commission's decision regarding prevention and liability

10. With regard to the decision by the Commission to address the question of prevention separately from liability, two different views were expressed. Many delegations, while agreeing with that approach, stressed the need to deal also with the question of liability. The remark was made that the Commission, in deciding to separate its study of prevention from that of liability in the true

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

[19] For these views, see *Official Records of the General Assembly, Fifty-second Session, Sixth Committee*, 17th meeting (A/C.6/52/SR.17, para. 27), statement by Mexico, and 23rd meeting (A/C.6/52/SR.23, para. 28), statement by New Zealand.

sense, had opted for an approach which on the one hand seemed fully justified and, on the other, had various far-reaching consequences.[20] It could not be denied that the two matters, international liability and prevention, were connected only indirectly, and it was justifiable to separate them for a number of reasons. Irrespective of whether liability constituted a primary or a secondary norm, it defined the consequences resulting from damage caused by activities which were lawful under international law. In that respect, reference could be made to draft article 35 on State responsibility, a link which was also reflected in the commentary on that provision. However, the draft on liability also included rules that were purely primary in scope, for example those concerning prevention, the violation of which would not entail liability but did fall within the sphere of State responsibility. It was therefore incorrect to combine prevention with a liability regime in the same draft unless a clear conceptual distinction was made therein. A separation of the two issues was also warranted on the grounds that they often dealt with different spheres of activity: prevention addressed almost all dangerous activities. Thus, principle 21 of the Stockholm Declaration,[21] which the Commission had already recognized as constituting existing law, did not distinguish different categories of activities. In contrast, it seemed appropriate to provide a liability regime only for those activities which were considered indispensable despite their dangerous nature. Such a regime would stipulate that damage which occurred despite precautionary measures need not be defrayed by society but should be compensated by the author of the damage. It was only in that way that the prevention and liability regimes were connected.

11. It was noted that the Working Group of the Commission had made significant progress on that topic in 1996, which had resulted in a set of draft articles on prevention. States had the obligation to prevent transboundary harm and to minimize risk, in particular through environmental impact assessments. Future work on the topic, however, should not be confined to prevention. If there was harm, there must be compensation. Prevention was merely an introduction to the crux of the topic, namely, the consequences of the acts in question. By studying each aspect of the topic with the same degree of care, the Commission would demonstrate that it was a modern organization prepared to take up the challenges of the twenty-first century.[22]

12. The remark was also made that article 1 defined the scope of the draft articles, namely, activities not prohibited by international law which involved a risk of causing significant transboundary harm.[23] State responsibility would arise from the occurrence of harm if the State failed to implement the obligations set out by the draft articles on prevention while engaging in activities of that nature. On the other hand, if the State fulfilled its obligations under the draft articles and harm still occurred, that would give rise to "international liability", which was the core issue. As soon as the Commission completed its first reading of the draft articles on "prevention", it should proceed to the issue of "liability". The decision on whether there was a need to adjust the title of the topic should be made in the light of the content of the draft articles.

13. The comment was made that the Commission's confusion on the relationship between the two aspects of the topic was understandable:[24] the "liability" aspect was definitely a key component of the topic in question and was of considerable practical import as well. However, the topic, which was relatively poorly defined in judicial practice and doctrine, was controversial and invited conflicts which sprang, *inter alia*, from differing interpretations of the matter under different systems of national law and entailed clashing theories with respect to risk, liability, abuse of rights and breaches of good-neighbourliness, to cite only a few; such clashes significantly clouded the question as to what regime was applicable at the international level. Even if the crux of the problem was defined in terms of primary rules, the fact remained that the meaning of *sic utere tuo ut alienum non laedas* was very difficult to interpret in positive international law. Accordingly, the Commission's decision to separate the two aspects of the topic, at least temporarily, was appropriate and would at least allow progress on the "prevention" aspect, which should be limited to hazardous activities.

14. Yet another view expressed the undesirability of considering the liability aspect of the topic. It was stated that while "international liability" had been the core issue of the topic as originally conceived, that did not mean that it should be retained for further work 25 years later, in the light of the meagre understanding reached in that time. Further work on the topic should be confined to the prevention aspect alone. The comment was also made that the Commission had failed over the past 20 years to define the scope and content of the topic, so it would be better to start with what was possible and practicable. Within that framework, the Commission should confine its work to transboundary damage and to activities having a risk of causing harm. The broader issues of creeping pollution and global commons should be excluded, at least initially.[25]

C. Prevention

15. With regard to the issue of prevention, it was stated that in view of the multifarious activities carried out by States within their borders it might be difficult to draw up an exhaustive list of activities involving a transboundary risk and that an illustrative list might be preferable. It was also noted that it might be difficult to accept the

[20] Ibid., 23rd meeting (A/C.6/52/SR.23, para. 41), for example, the views expressed by Austria.

[21] See footnote 18 above.

[22] See *Official Records of the General Assembly, Fifty-second Session, Sixth Committee*, 17th meeting, statement by Mexico (A/C.6/52/SR.17, para. 27); 23rd meeting, statements by Italy (A/C.6/52/SR.23, para. 12) and New Zealand (ibid., para. 28); 24th meeting, statement by Portugal (A/C.6/52/SR.24, paras. 62–63); 25th meeting, statements by Brazil (A/C.6/52/SR.25, para. 16), the Republic of Korea (ibid., para. 38) and Argentina (ibid., para. 43).

[23] Ibid., 23rd meeting, statement by China (A/C.6/52/SR.23, para. 6).

[24] Ibid. statement by the Czech Republic (A/C.6/52/SR.23, para. 66).

[25] Ibid., 19th meeting, statement by the United Kingdom of Great Britain and Northern Ireland (A/C.6/52/SR.19, para. 48); and 24th meeting, statement by Japan (A/C.6/52/SR.24, para. 3).

qualification of "transboundary harm" as "significant", a term which could be controversial, particularly as there was no provision for a binding dispute settlement mechanism. In the absence of such a mechanism, the adjective should be deleted.[26] In the event of harm, the aggrieved State should be entitled to compensation by the State from which the harm emanated. It was also stated that the work on prevention should include a procedure under which the parameters and ramifications of prevention in international law would first of all be clarified and then assessed against the relevant draft articles already elaborated by the Commission. In that regard, it was impossible to ignore the difficulties of defining "hazardous acts" which would determine the scope of the provisions. At the same time, however, it was important not to lose sight of the original task, namely the elaboration of a regime of liability *sensu stricto*. The comment was further made that the Commission should take account of contemporary practice in the field, which placed more emphasis on providing incentives, including capacity-building, to promote the observance of rules of due diligence. Implementation of the due diligence obligation should be made directly proportional to the scientific, technical and economic capacities of States. Failure to meet that obligation should entail enforceable legal consequences not involving economic or other sanctions.[27]

16. It was also observed that some activities might become hazardous only in conjunction with other activities, a fact that might necessitate an expanded exchange of information, a more liberal consultation regime and a broader assessment of risk that encompassed both the environment of other States and activities in those States. Similarly, the effects of transboundary activities in two States might combine to be felt in a third State, thus creating more than one State of origin.[28]

D. Comments on specific articles recommended by the Working Group

17. The remark was made that the proposed draft articles elaborated by the Working Group in 1996 were based on the principle of customary international law, which established the obligation to prevent or mitigate transboundary damage arising out of activities that were under the control of a State.[29] It was noted that the existence of harm was a prerequisite for the establishment of liability. However, the question of whether liability should flow from the mere existence of harm or from conduct reflecting a lack of diligence might be better determined by the nature of the activity and the risk it posed. It was also noted that reparation was preferable to compensation in the case of environmental damage. It was observed that the remaining draft articles were consistent with what national and international environmental assessment should be. Regarding the future development of the draft articles, it would be desirable to permit States to override them where they dealt with specific issues of liability with respect to which a treaty was being negotiated. It was also noted that the general issue of the relationship with existing treaty law in the field of international liability must be addressed as well.

18. The view was expressed that article 4 as currently drafted was broader than its predecessor, article B.[30] Under a rubric of prevention that went beyond the prevention of risk, it now encapsulated three obligations: risk prevention *ex ante*, risk minimization *ex ante* and harm minimization *ex post*, the last of which, being related to transboundary harm that had actually occurred, might in some circumstances amount to prevention. Article 4 distinguished the occurrence of harm, which must be significant, from its effects, which might be minor. Thus, if article 4 was taken in conjunction with article 1 (*b*), the draft articles would apply to activities that did not involve risk of significant transboundary harm but did in fact cause it. It would be useful to clarify whether the last part of article 4 intended to impose an obligation to remove harmful effects; as drafted, some choice on the part of States could be implied, especially in conjunction with article 3, on freedom of action. In addition, the broad concept of prevention under article 4 was not commensurate with that under articles 9 to 19, on prevention or minimization of risk, being more closely related to that under articles 20 to 22, on compensation. With respect to article 4 the comment was also made that the article was important because it emphasized the importance of preventive action, and in particular draft article 1 (*b*), which dealt with activities that did not normally entail risk but that nonetheless caused harm.

19. It was noted that article 6, like article 4, drew a distinction between harm and effects, but referred to effects in both affected States and the State of origin.[31] Clarification was needed as to whether both types of effects were also covered by the obligations in article 4, or only effects in affected States.

20. With respect to articles 9 and 11, it was stated that they were both concerned with the question of authorization and should be placed together.[32] The emphasis in article 11 could be strengthened by introducing the concept of good faith. Also, the introduction of a temporal element, requiring reasonably prompt action on the part of a State in directing those responsible for pre-existing activities to obtain authorization, would reinforce the need for due diligence.

21. It was stated that under article 10 (risk assessment) the questions of who should conduct the assessment, what it should contain and the form of authorization were left to the State of origin to decide; it was in fact appropriate to avoid being overly prescriptive.[33]

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[26] Ibid., statement by Pakistan, 18th meeting (A/C.6/52/SR.18, para. 64).

[27] Ibid., statement by India (A/C.6/52/SR.18, para. 30). Emphasis on providing incentives, including capacity-building, was highlighted by India.

[28] Ibid., statement by Australia, 24th meeting (A/C.6/52/SR.24, para. 27).

[29] Ibid., statement by Canada, 25th meeting (A/C.6/52/SR.25, para. 30).

[30] Ibid., statement by Australia, 24th meeting (A/C.6/52/SR.24, para. 22). See also the statement by Portugal (ibid., para. 62).

[31] Ibid., statement by Australia (A/C.6/52/SR.24, para. 23).

[32] Ibid., para. 24.

[33] Ibid., para. 25.

22. It was further observed that articles 13 to 18 had to be considered in the light of international regimes governing more specific areas of activity.[34] The purpose of article 13 was to require notification and transmission of information. As currently drafted, it also required a response, but that requirement might be more appropriately placed under article 14 (exchange of information) or article 17 (consultations on preventive measures). If, on the other hand, article 13 was to involve the exchange of information and not simply transmission and notification, then articles 13 and 14 could be combined under the title "Notification and exchange of information".

23. On the general issue of international liability, it was noted that the Commission should elaborate on joint liability arising from joint activities, and on associated issues including indemnities, rights of action and of inspection, dispute settlement principles and bodies, access, investigation and clean-up. The comment was also made that the relationship between this topic and State responsibility should be clearly defined.[35]

24. Given the comments made by States in the Sixth Committee at the fifty-second session of the General Assembly in 1997, there is a clear mandate to proceed with the work on prevention. Several comments on general issues and observations made on specific articles recommended by the Working Group in 1996 are dealt with below.

25. It is proposed to clarify the concept of prevention and the scope of the proposed draft articles, keeping in mind the work done by the Commission so far. Thereafter, the various elements or principles comprising the regime of prevention will be dealt with. The following two chapters on the concept of prevention and on the scope of the draft articles rely mostly on material drawn from the records of the Commission on the subject, particularly the reports of the two previous Special Rapporteurs as well as the decisions taken by the Commission. While the focus is on the principle of prevention, some reference to reparation and liability is inevitable since the subjects of prevention, reparation and liability had been dealt with as closely related concepts in the work of the Commission in the past. However, even while such reference is made to reparation or liability, care has been taken not to digress from the topic of prevention, and thus consideration of matters like strict or absolute liability or any legal principles concerning the post-harm phase has been strictly avoided. A review of the work accomplished by the Commission so far during the last 20 years is considered necessary for the following reasons:

(*a*) As this is a newly constituted Commission, such a review would provide a necessary background to the members of the Commission;

(*b*) Any regime to be developed on prevention should usefully incorporate the various elements of the concept of prevention so far developed by the Commission with the large support of both members of the Commission and delegations in the Sixth Committee; the review will attempt to identify these elements as far as possible;

(*c*) Such a review would also highlight the various arguments or points of view expressed on the difficult issues involved, like the relationship between liability and responsibility, the equation between the principle of prevention and liability on the one hand and responsibility on the other, the need to define legal thresholds of harm as well as other components of the scope of the topic. These issues engaged the attention of the Commission as well as of the Sixth Committee in the past and they will also do so in the future. Accordingly, the analysis of the trends in decisions on these issues would help us to conclude the work of the Commission on the topic as expeditiously as possible.

[34] Ibid., para. 26.

[35] Ibid., statements made by Australia, 17th meeting (A/C.6/52/SR.17, para. 28) and Thailand (ibid., para. 39).

CHAPTER II

The concept of prevention

A. Prevention within the context of sustainable development

26. Prevention as a concept has assumed great importance in any scheme of avoiding or not causing harm to one's neighbour, howsoever widely or narrowly neighbourhood is defined. In the modern context, not only do various activities project damage or harm beyond their immediate confines, but the magnitude of such damage, whenever and wherever it occurs, has also become a matter of grave concern. Accordingly, growth of population, the need for economic development, ever growing consumerism and materialism have resulted in cities becoming congested, rivers and oceans becoming polluted, forests becoming depleted, land becoming scarred, toxic and hazardous wastes abounding, with the health, well-being and even the survival of humankind at stake. Global warming, ozone depletion, deforestation, desertification, deteriorating biodiversity, the unmanageable and unsustainable plundering of natural resources and other factors account for the deterioration of the global environment, threatening to put the planet in peril.[36]

27. Meeting the challenges posed by these problems has become an urgent and enduring concern of humankind. The United Nations Conference on Human Environment held in Stockholm in June 1972 and the United Nations Conference on Environment and Development held at Rio de Janeiro in June 1992 are two of the most notable efforts

[36] For a treatment of many of these themes, see "Our precious planet", *Time*, special issue (November 1997).

of the international community to identify policies, programmes and strategies for avoiding transnational harm to the environment and to conclude treaties to implement them. Both of those conferences and other follow-up meetings and declarations gave high priority to the concept of prevention in achieving desired goals. Principle 2 of the Rio Declaration,[37] which basically reaffirmed principle 21 of the Stockholm Declaration,[38] reads:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.[39]

28. ICJ, in its advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons* of 8 July 1996, confirmed that principle 2 restated a rule of customary law, observing that "[t]he existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment".[40]

29. As has been observed, however, "[t]he exact scope and implications of principle 2 are not clearly determined yet. Certainly not all instances of transboundary damage resulting from activities within a State's territory can be prevented or are unlawful".[41]

30. According to the Rio Declaration,[42] the obligation to avoid causing significant transboundary harm requires an approach which promotes prevention as a duty and as a concept integral to the process of development aimed at eradicating poverty (principles 4 and 5). As has been rightly stressed in principle 25: "Peace, development and environmental protection are interdependent and indivisible." This interdependent approach has been reiterated in the final documents of recent United Nations conferences such as the International Conference on Population and Development in Cairo, the World Summit for Social Development in Copenhagen, the Fourth World Conference on Women in Beijing, the second United Nations Conference on Human Settlements (Habitat II) at Istanbul and the nineteenth special session of the General Assembly for the purpose of an overall review and appraisal of the implementation of Agenda 21.

31. The special situation and needs of developing countries, in particular, the least developed and those most environmentally vulnerable, require special priority in this connection (principle 6).[43]

B. Prevention as a preferred policy

32. The obligation not to cause damage to the environment of other States or of areas beyond the limits of national jurisdiction is a clear directive to States to employ their best possible efforts to prevent such transboundary damage. Prevention is preferable because compensation in case of harm can often not restore the situation prevailing prior to the event or accident, i.e. the status quo ante.[44] Discharge of the duty of prevention or due diligence is all the more required as knowledge regarding the operation of hazardous activities, materials used and the process of managing them and the risk involved is steadily growing. From a legal perspective, the enhanced ability to trace the chain of causation, i.e. the physical link between the cause (the activity) and the effect (harm) in spite of several intervening factors in the chain of causation, makes it also imperative to take all steps necessary to prevent harm to avoid liability. Prevention as a policy in any way is better than cure. It is a time-honoured policy and one that is widely used by many developed and industrialized societies to manage and even reduce or eliminate the ill effects of their economic growth.

33. The issue of prevention, therefore, has rightly been stressed by the Experts Group on Environmental Law of the World Commission on Environment and Development. Article 10 recommended by the Group in respect of transboundary natural resources and environmental interferences thus reads: "States shall, without prejudice to the principles laid down in Articles 11 and 12, prevent or abate any transboundary environmental interference or a significant risk thereof which causes substantial harm—

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[37] *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.

[38] See footnote 18 above.

[39] For the text of the Rio Declaration, the Stockholm Declaration and many other relevant instruments, see Birnie and Boyle, *Basic Documents on International Law and The Environment*.

[40] *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996*, p. 242, para. 29.

[41] "Rio Declaration on Environment and Development application and implementation: report of the Secretary-General" (E/CN.17/1997/8), para. 23. It has also been pointed out that "[i]n general international practice has not been particularly favorable to remedying environmental damage through use of traditional rules of state responsibility. Characteristically states proclaim the principle of responsibility but demonstrate hesitancy in adding detailed norms. They are even more reluctant to invoke it against other states when actual cases arise" (Kiss and Shelton, op. cit., p. 360).

[42] See footnote 37 above.

[43] The Rio Declaration further states that, "[i]n view of the different contributions to global environmental degradation, States have common but differentiated responsibilities" (principle 7). In this connection, the point has been made that:

> "Differentiated responsibilities may result in different legal obligations. In practical terms, the principle of common but differentiated responsibilities is translated into the explicit recognition that different standards, delayed compliance timetables or less stringent commitments may be appropriate for different groups of countries, to encourage universal participation. The developed countries acknowledge their responsibility because of the pressure on the global environment, and because of the technologies and financial resources they command. A number of international agreements recognize a duty on the part of industrialized countries to contribute to the efforts of developing countries to pursue sustainable development and to assist developing countries in protecting the global environment. Such assistance may entail, apart from consultation and negotiation, financial aid, transfer of environmentally sound technology and cooperation through international organizations."

(E/CN.17/1997/8, para. 46)

[44] The principle of prevention is referred to as a starting point for the elaboration of an international regime concerning prevention of transboundary harm. The basic assumption is that environmental protection is best achieved by preventing environmental harm rather than attempting to compensate for environmental damage once it has occurred. See UNEP, Final report of the Expert Group Workshop on International Environmental Law Aiming at Sustainable Development (UNEP/IEL/WS/3/2) (1996), p. 12.

i.e. harm which is not minor or insignificant."[45] It must be further noted that the well-established principle of prevention was highlighted in the arbitral award in the *Trail Smelter* case[46] and was reiterated not only in principle 21 of the Stockholm Declaration,[47] but also in General Assembly resolution 2995 (XXVII) of 15 December 1972 on cooperation between States in the field of the environment. This principle is also reflected in principle 3 of the Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, adopted by the UNEP Governing Council in 1978, which provided that States must

> avoid to the maximum extent possible and ... reduce to the minimum extent possible the adverse environmental effects beyond its jurisdiction of the utilization of a shared natural resource so as to protect the environment, in particular when such utilization might:
>
> (*a*) cause damage to the environment which could have repercussions on the utilization of the resource by another sharing State;
>
> (*b*) threaten the conservation of a shared renewable resource;
>
> (*c*) endanger the health of the population of another State.[48]

34. Prevention of transboundary harm to the environment, persons and property has been accepted as an important principle in many multilateral treaties concerning protection of the environment, nuclear accidents, space objects, international watercourses, management of hazardous wastes and prevention of marine pollution. It has also been accepted in several conventions concluded by the Economic Commission for Europe such as the 1979 Convention on Long-Range Transboundary Air Pollution; the 1991 Convention on Environmental Impact Assessment in a Transboundary Context; the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes; and the 1992 Convention on the Transboundary Effects of Industrial Accidents. Through these and other measures, Europe is effectively attempting to integrate environmental protection into economic development. Moreover, "a growing economy is actually seen as a necessary precondition for sustainability, in that it creates the resources needed for ecological development, the restoration of earlier environmental damage and the prevention of future harm".[49]

C. Prevention as an obligation of conduct

35. A study of State responsibility for industrial and technological damage which may be involved inherently as a risk in beneficial or developmental activities concluded that any such responsibility for transboundary harm was limited only to obligations of conduct and did not extend to obligations of result.[50] Dupuy observed in this connection:

> The various limits usually placed on the legal exercise of [States'] powers in these respects have the effect not of protecting third parties against any infringements of their subjective rights resulting from the conduct of these activities, but rather of making it an obligation for the States engaging in them to take the greatest care to *prevent* any possible damage.[51]

36. He further stated that prevention was better than cure, so that a regime which articulated required standards of behaviour might be worth more than one that set a tariff for loss or injury.[52]

37. Another commentator also foresaw the need for the development of new rules in respect of lawful acts of States which carried a risk of causing serious damage. Observing that it was doubtful whether we could stretch the limits of responsibility for wrongful acts indefinitely without attacking its very foundation, Reuter noted:

> We have only to consider that certain risks, which are normal enough for no prohibition to be placed on the enterprises that create them, entail an obligation to make reparation for damage if the risk materializes. In such a case, responsibility exists without any breach of a rule of international law. The act is lawful, but it entails an obligation of reparation. Responsibility is bound up with mere causality. No one can say at present that such a rule exists in international law; but since mankind has never shrunk from highly dangerous undertakings, the rule might be adopted at least in part.[53]

38. Justifying the development of the duty of prevention as a duty of care, Mr. Quentin-Baxter observed that "conventions dealing with liability seldom stand in isolation: much more usually they are a link in a chain of obligations, which in turn form part of a larger international effort designed to prevent or minimize loss or damage arising from the particular activity". He added that

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[45] *Environmental Protection and Sustainable Development: Legal Principles and Recommendations*, adopted by the Experts Group on Environmental Law of the World Commission on Environment and Development (Brundtland Commission) (London, Graham & Trotman, 1987), p. 75. It was also noted that the duty not to cause substantial harm could be deduced from the non-treaty-based practice of States, and from the statements made by States individually and/or collectively. See Lammers, *Pollution of International Watercourses*, pp. 346–347 and 374–376.

[46] UNRIAA, vol. III (Sales No. 1949.V.2), p. 1905.

[47] See footnote 18 above.

[48] UNEP, *Environmental Law: Guidelines and Principles*, No. 2, *Shared Natural Resources* (Nairobi, 1978), p. 2. For a mention of other sources where the principle of prevention is reflected, see *Environmental Protection and Sustainable Development* … (footnote 45 above), pp. 75–80.

[49] European Commission, *Caring for Our Future: Action for Europe's Environment*, 1st ed. (Luxembourg, 1997), p. 10.

[50] As to obligations of conduct and result, see articles 20 and 21 of the draft articles on State responsibility (Part I) adopted by the Commission on first reading, *Yearbook ... 1980*, vol. II (Part Two), p. 32.

[51] Dupuy, *La responsabilité internationale des États pour les dommages d'origine technologique et industrielle*, cited in the second report of Mr. Quentin-Baxter (see footnote 2 above), p. 113, footnote 77. The Experts Group on Environmental Law of the World Commission on Environment and Development noted: "While activities creating a significant risk of causing substantial harm must in principle be prevented or abated, it may well be that, in the case of certain dangerous activities, the unlawfulness will be taken away when all possible precautionary measures have been taken to preclude the materialization of the risk *and the benefits created by the activity must be deemed to far outweigh the benefits to be obtained by eliminating the risk* which would require putting an end to the activity itself" (*Environmental Protection and Sustainable Development* … (footnote 45 above), p. 79). See also article 11 on liability for transboundary environmental interferences resulting from lawful activities proposed by the Experts Group (ibid., p. 80).

[52] Dupuy, op. cit., cited in the second report of Mr. Quentin-Baxter (see footnote 2 above), p. 114, para. 46.

[53] Reuter, "Principes de droit international public", p. 593, cited in the second report of Mr. Quentin-Baxter (see footnote 2 above), p. 116, footnote 95.

"[o]bligations of reparation, therefore, are not allowed to take the place of obligations of prevention."[54]

39. A study of the various conventions involved also led Mr. Quentin-Baxter to the conclusion that, in respect of activities which bore a risk of damage, Governments retained ultimate supervisory functions, even when they passed on to private operators the duty to provide compensation and to guarantee its payment.[55] He noted further that the strictness of the standard of care tended to increase with the degree of danger inherent in the enterprise, which standard, of course, related primarily to obligations of prevention. The duty of care, operating as a function of such obligations, required the State within whose territory or jurisdiction the danger arose to work in good faith for a just solution, taking due account of all the interests involved.[56]

D. Prevention and reparation: a continuum and a compound obligation

40. Mr. Quentin-Baxter's essential approach was to deal with the subject of prevention along with reparation, treating them as part of a continuum rather than as two mutually exclusive options.[57] In short, in his conception, this topic allowed a soft approach to the problem of reconciling one State's freedom of action with another State's freedom from transboundary harm.[58] More generally, this system of "different shades of prohibition"[59] was projected as an appeal to "self-regulation" by the source State; if it could not reach agreement with the affected State, it was at least duty-bound to take objective account of the legimate interests of the affected State, whether by providing a protective regime or by providing reparation for a transboundary loss or injury not governed by an adequate or agreed regime.[60]

E. State responsibility versus obligations of prevention and liability

41. Distinguishing obligations that arise respectively from wrongful acts and from acts which international law does not prohibit, Mr. Quentin-Baxter noted that the primary aim of the draft articles he intended to develop 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".[61] He further explained that the term liability was used in the sense of "a negative asset, an obligation, in contra-distinction to a right". Accordingly, it referred not only to the consequences of an obligation but rather to the obligation itself which like responsibility included its consequences.[62]

42. Thus, it was submitted that an obligation in respect of an act not prohibited would arise only when a primary rule of international law so provided. In other words, the various principles expected to be dealt with under this topic would be in the nature of an elaboration of a primary rule rather than as legal consequences of violations of a primary obligation.

43. As a further variation from the topic of State responsibility, the phrase "acts not prohibited" in the title was used, as explained, to indicate that an injured State did not have to prove the lawfulness of the activities of which it complained, as the phrase carried implicitly the enlarged meaning "acts, whether or not prohibited".[63] Persuaded by Mr. Quentin-Baxter, the Commission took an initial decision which it repeatedly reaffirmed to the effect that "the topic lay within the field of 'primary' rules, i.e. rules that are governed by and do not compete with the established system of State responsibility for wrongful acts or omissions".[64] The development of the topic of international liability, hence, the duty of prevention, would involve admitting the existence and reconciliation of "legitimate interests and multiple factors".[65] It may be recalled that principle 23 of the Stockholm Declaration[66] also referred to the criterion of certain categories of legitimate interests. As a basis for the development of the theme of "legitimate interests and multiple factors", Mr. Quentin-Baxter referred to a number of cases. He noted the following principle affirmed in the "*Lotus*" case:[67] "limitations upon the sovereignty of States depend upon the existence of primary rules of obligation, and these are to be proved, not presumed".[68] He further pointed out that

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[54] Second report of Mr. Quentin-Baxter (see footnote 2 above), p. 120, para. 70; see also various conventions cited in footnote 115 of the same report. The Institute of International Law, in its resolution on environment of 4 September 1997, observed that the duty to take all necessary care to prevent damage to the environment imposed upon States, regional and local Governments and juridical or natural persons existed independently of any obligation to make reparation (*Yearbook of the Institute of International Law*, vol. 67, part II, session of Strasbourg, 1997, art. 9, p. 483). See also the preambular paragraph of its resolution of the same date entitled "Responsibility and liability under international law for environmental damage", which noted that "both responsibility and liability have in addition to the traditional role of ensuring restoration and compensation that of enhancing prevention of environmental damage" (ibid., p. 487).

[55] See the provisions cited in his second report (footnote 2 above), p. 120, footnote 116.

[56] Ibid., pp. 120–121, paras. 71–72.

[57] Mr. Yankov felt that the purpose of the topic was to deal with a "twilight zone", *Yearbook ... 1981*, vol. I, p. 226, 1687th meeting, para. 1. Others believed that the topic was concerned with the regulation of activities that were in principle useful and legitimate and should, therefore, not be prohibited but only regulated with conditions attached to the conduct. See, in this respect, the view of Mr. Riphagen (*Yearbook ... 1980*, vol. I, 1630th meeting, p. 245, paras. 29–30) and Sir Francis Vallat (ibid., 1631st meeting, p. 250, para. 36). Mr. Quentin-Baxter stated that, "[f]rom a formal standpoint, the subject-matter of the present topic must be expressed as a compound 'primary' obligation that covers the whole field of preventing, minimizing and providing reparation for the occurrence of physical transboundary harm" (fourth report (see footnote 2 above), p. 213, para. 40).

[58] Fourth report (see footnote 2 above), p. 213, para. 43.

[59] As the activities coming within the scope of this topic "are near the moving frontier between lawfulness and unlawfulness" and hence represent "different shades of prohibition", many members within the Commission and in the Sixth Committee were unwilling to describe such activities as licit or illicit (ibid., pp. 206–207, para. 20). For a mention of various views expressed in this regard, see paragraphs 20–22 (ibid.).

[60] Ibid., p. 214, para. 44.

[61] Preliminary report (see footnote 2 above), p. 250, para. 9.

[62] Ibid., para. 12.

[63] Ibid., p. 251, para. 14.

[64] Fourth report (see footnote 2 above), p. 203, para. 7.

[65] Preliminary report (see footnote 2 above), p. 258, para. 38.

[66] See footnote 18 above.

[67] *"Lotus", Judgment No. 9, 1927, P.C.I.J., Series A, No. 10.*

[68] Preliminary report (see footnote 2 above), p. 257, para. 35.

ICJ held in the *Corfu Channel* case that every State had an obligation "not to allow knowingly its territory to be used for acts contrary to the rights of other States".[69] The Court was referring to a breach of an undisputed rule of international law that is the right of innocent passage, i.e. to acts contrary to the rights of other States. This was a ruling similar to that of the arbitral tribunal in the *Trail Smelter* case.[70]

44. Further, the duty to have regard to all the interests involved could be seen to be arising from the duty to take reasonable care as well as from the application of an equitable principle. Accordingly, it was suggested that a discharge of the duty of reasonable care would involve not only taking necessary precautions to prevent damage, but also providing for an adequate and accepted regime of compensation.[71] The regulation of mutual obligations in relation to shared interests could involve "boundless choices" for States. For example, agreed safety and supervisory measures could be supplemented by conventional regimes regulating liability for damage.[72] Or a regime of care for shared environment providing equal care for individual, as well as differing, needs of States and peoples concerned could be agreed upon by taking into consideration all relevant factors.[73] The regime of reasonable care required of a State that permitted an activity the harmful effects of which might be felt outside its own borders might, for example, include obligations to collect and furnish information to seek agreement upon methods of construction or procedures or tolerable levels of contamination and to provide guarantees of reparation in case of precautions which failed to prevent injurious consequences.

F. Schematic outline proposed by Mr. Quentin-Baxter[74]

45. The above provided the conceptual backdrop for the schematic outline proposed by Mr. Quentin-Baxter, the main objective of which was "to reflect and encourage the growing practice of States to regulate these matters in advance, so that precise rules of prohibition, tailored to the needs of particular situations—including, if appropriate, precise rules of strict liability—will take the place of the general obligations treated in this topic".[75]

46. With respect to the obligation of prevention, section 2, paragraph 1, of the schematic outline provided for the duty to inform and section 2, paragraph 5, for the duty to cooperate in good faith to reach agreement, if necessary, upon the establishment of a non-binding fact-finding procedure. Further, section 6 dealt with various factors States could take into consideration with a view to achieving mutual accommodation and balancing of interests.

47. Reaction to the general analysis and approach adopted by Mr. Quentin-Baxter in his five reports and in particular to the schematic outline which he proposed was generally favourable and supportive.

48. During the discussion in the Sixth Committee of the General Assembly at its thirty-seventh session, there was preponderant support both for the general tenor of the schematic outline and, more specifically, for implementing the duty to avoid, minimize and provide reparation for transboundary losses or injuries. Some thought that the schematic outline should be reinforced to give better guarantees that that duty would be discharged. A few, on the other hand, were sceptical about the value of the topic or its viability. A few others thought that a conceptual distinction must be made between the question of prevention and that of reparation and several saw advantage in concentrating upon the latter duty. Most, however, were firmly in favour of maintaining the linkage between prevention and reparation indicated in the schematic outline.[76]

G. Prevention and liability: treatment of the topic by Mr. Barboza

49. After taking over the subject, while accepting the general orientation of Mr. Quentin-Baxter, Mr. Barboza developed the theme of international liability further. He also revisited many of the issues that had been raised during the time of Mr. Quentin-Baxter. He recommended that the question of the relationship of the topic of liability to the topic of responsibility should not be reopened. Noting that the previous Special Rapporteur had used two main guidelines to draw a conceptual distinction between his topic and that of State responsibility, one relating to the distinction between primary and secondary rules and the second emphasizing duties of prevention and "due care", and that the schematic outline had found general acceptance within the Commission and in the Sixth Committee, in spite of some reservations, he said that:

> There seemed to be a clear indication that higher approval had been given to the approach of considering transboundary loss or injury as a topic of discussion, to including prevention as an integral part of that topic, as well as to the other procedures and concepts referred to in the outline. The topic, for which a sound basis thus exists, is of concern to

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[69] *Corfu Channel, Merits, Judgment, I.C.J. Reports 1949*, p. 22.

[70] See footnote 46 above.

[71] Preliminary report (see footnote 2 above), p. 260, para. 46. Mr. Quentin-Baxter further stated that "[i]f, however, the same injurious consequences occur in circumstances the possibility of which not even a vigilant State could have been expected to envisage, equity may still suggest that the State which took or allowed the action should provide compensation for the innocent victim; but other equities may outweigh that consideration" (ibid.). Moreover, he pointed out that the "criterion of actual knowledge of a source of danger may sometimes be replaced, as the test of responsibility for wrongfulness, by an assessment as to whether a lack of knowledge is compatible with the required standard of due diligence" (ibid., p. 263, para. 55).

[72] Ibid., p. 261, para. 48.

[73] As for example, in the case of the sharing of watercourses for non-navigational uses among co-riparians. Article V of the Helsinki Rules on the Uses of the Waters of International Rivers (ILA, *Report of the Fifty-second Conference, Helsinki, 1996* (London, 1967), pp. 484 et seq.; and reproduced in part in *Yearbook … 1974*, vol. II (Part Two), document A/CN.4/274, p. 357, para. 405); and article 6 of the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses suggested various such factors. It is also relevant to note the following observation made in the *Lake Lanoux* case: conflicting interests must be reconciled by mutual concessions and agreements involving broad comparison of interests and reciprocal goodwill (UNRIAA, vol. XII (Sales No. 63.V.3), p. 308).

[74] Fourth report, annex, p. 223 (see footnote 2 above).

[75] Fourth report (footnote 2 above), p. 216, para. 50.

[76] Ibid., p. 204, para. 10.

a large number of countries and will apparently have an interesting role to play in contemporary international law.[77]

50. Mr. Barboza noted that the main aim of the topic was to promote a regime of liability by way of dealing with the consequences of the damage that might arise out of the transboundary harm caused by activities not prohibited by international law. Within an overall scheme of such a regime of liability he envisaged a proper role for prevention:

> [I]n the absence of an agreed régime for assigning direct responsibility to individuals in certain cases, the State not only would be liable when there were injurious consequences of certain activities carried out in its territory or under its control, but also would be responsible for obligations of prevention, i.e. all the duties involved in avoiding or minimizing such consequences.[78]

51. Section 2, paragraph 1, of the schematic outline envisaged a duty for the acting State to provide the State likely to be affected by loss or injury to persons or things within the territory or control of that State because of an activity within its territory or control "with all relevant and available information, including a specific indication of the kinds and degrees of loss or injury that it considers to be foreseeable, and the remedial measures it proposes". Similarly, section 2, paragraph 5, provided for the acting State's obligation to cooperate in good faith to reach agreement with the affected State, in case of a dispute arising between the affected State and the acting State as to whether the measures proposed were sufficient to safeguard the interests of the former. For this purpose, it was further suggested that a non-binding fact-finding and conciliation procedure might be followed. The schematic outline, however, provided in the first sentence of sections 2, paragraph 8, and 3, paragraph 4, that failure to comply with these two obligations did not give rise to any right of action, while specifying that the acting State

> has a continuing duty to keep under review the activity that gives or may give rise to loss or injury; to take whatever remedial measures it considers necessary and feasible to safeguard the interests of the affected State; and, as far as possible, to provide information to the affected State about the action it is taking.[79]

52. Reviewing the above propositions of the schematic outline, in particular the first sentence of sections 2, paragraph 8, and 3, paragraph 4, and in view of the doubts expressed by some members of the Commission about the value of procedures which could be neglected without engaging the responsibility of the State for wrongfulness, Mr. Barboza recommended that the first sentence in sections 2, paragraph 8, and 3, paragraph 4, should be deleted. In his view, failure to fulfil the obligations contained in sections 2 and 3 would entail drawing certain adverse procedural consequences against the acting State, which the outline itself had noted in section 5, paragraph 4, according to which "the affected State shall be allowed a liberal recourse to inferences of fact and circumstantial evidence in order to establish whether the activity does or may give rise to loss or injury".[80] Pointing out the relevance of the *Trail Smelter* case[81] in this respect, Mr. Barboza noted that, under the latter parts of sections 2, paragraph 8, and 3, paragraph 4, of the outline, the acting State had an obligation of due diligence to monitor the activity continuously and to take whatever remedial measures it considered necessary and feasible to safeguard the interests of the affected State. Moreover, where injury actually resulted, there was a provision to make reparation as provided in section 4, paragraph 2, of the schematic outline.[82]

53. Subject to the above considerations, and noting that the obligation of prevention in a regime of liability for risk was only an obligation of due diligence, Mr. Barboza came to the conclusion that the obligation laid down at the end of sections 2, paragraph 8, and 3, paragraph 4, formed part of a regime of prevention whose primary effects, which came into play only after injury had occurred, were to aggravate the legal and material position of the source State.[83]

54. With respect to activities involving a risk of transboundary harm, Mr. Barboza concluded that a State engaging in such activities should notify, consult and negotiate a mutually accepted regime governing such an activity and, in the process, if the States so desired, they could even prohibit the activity.[84] He noted, however, that there was no requirement of prior consent from the States likely to be affected to be complied with by the State initiating such activities in its territory.[85]

55. Elaborating on the various requirements of prevention, Mr. Barboza identified at least six elements:[86]

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[77] Preliminary report (see footnote 5 above), p. 99, para. 9.

[78] Second report (see footnote 5 above), p. 146, para. 5.

[79] Fourth report (see footnote 2 above), p. 224.

[80] Ibid., pp. 224–225.

[81] See footnote 46 above.

[82] Second report, p. 149, para. 20; p. 150, paras. 24–25; p. 154, para. 41(*c*); and p. 159, para. 63. See also the preliminary report, p. 100, para. 16 (*c*) (footnote 5 above).

[83] Second report, p. 160, para. 66. See also draft article 18 proposed by Mr. Barboza in his sixth report, annex, p. 108 (footnote 5 above).

[84] Second report, pp. 152–154, paras. 34–40. See also Barboza, "International liability for the injurious consequences of acts not prohibited by international law and protection of the environment", p. 332.

[85] The arbitral tribunal in the *Lake Lanoux* case, after assigning the duty to the acting State to consider any negotiation in good faith with the affected State(s), asserted:

> "International practice reflects the conviction that States ought to strive to conclude such agreements [regarding the industrial use of international rivers] … But international practice does not so far permit more than the following conclusion: the rule that States may utilize the hydraulic power of international watercourses only on condition of a *prior* agreement between the interested States cannot be established as a custom, even less a general principle of law."

(*International Law Reports, 1957* (London), vol. 24 (1961), p. 130)

[86] See Barboza, loc. cit., pp. 334–336. Other commentators also examined various components of the principle of prevention. One of them referred to the various obligations involved in the duty of prevention in a slightly different and more elaborate manner. According to him, the duty of prevention would involve the principle of cooperation in scientific research, systematic observations and assistance, the principle of exchange of information, the principles of prior notice, environmental impact assessment and consultation, the principle of risk assessment, warning and emergency assistance (Iwama, "Emerging principles and rules for the prevention and mitigation of environmental harm", *Environmental Change and International Law: New Challenges and Dimensions*). See also other contributions in that volume, particularly those of Brown Weiss and Orrego Vicuña.

In its 1997 resolution on responsibility and liability under international law for environmental damage (see footnote 54 above), the Institute of International Law noted that the principles of responsibility and liability were designed to encourage prevention and provide for restoration and compensation (art. 2). The principle of prevention, it was suggested, included mechanisms concerning notification and consultation, regular exchange of information and the increased utilization of environmental impact assessments. It was further noted that the implications of

(*a*) Prior authorization of an activity where it involves risk of transboundary harm. Such authorization, once provided by the State of origin, could also constitute, in his view, evidence of "knowledge" on the part of the State within the requirements of the *Corfu Channel* case (i.e. evidence of "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States"[87]);

(*b*) Risk assessment: this principle would require every State to undertake an assessment to determine the extent and nature of the risk of the activity, including an evaluation of the possible impact of that activity on persons or property as well as on the environment of other States. Such a requirement, Mr. Barboza noted, was supported by the *Trail Smelter* case,[88] principle 17 of the Rio Declaration[89] and, more notably, by the provisions of the 1991 Convention on Environmental Impact Assessment in a Transboundary Context. By way of further clarification of this principle, he observed that such an assessment could consider the type or source of energy used in a manufacturing activity, substances manipulated in production, the location of the activity and its proximity to the border area, the vulnerability of zones of affected States situated within the reach of an activity, etc. He also noted that by way of risk assessment States could also agree upon a list of substances that are considered to be dangerous or hazardous or list the activities that are presumed to be harmful in respect of which the requirement of authorization of assessment could be made mandatory;[90]

(*c*) The principle of information and notification, which is a logical consequence of any conclusion reached on the risk involved upon assessment. This principle is well recognized in the context of the use of international watercourses;[91]

(*d*) The principle of consultations is essentially a principle of cooperation with a view to achieving acceptable solutions regarding measures to be adopted in order to prevent or minimize the risk of causing significant transboundary harm. Like Mr. Quentin-Baxter, Mr. Barboza also noted that any effort involved in such consultations should aim at a balance of interests of all the States concerned; and that in the absence or upon failure of consultations or negotiations held in good faith, the State of origin was free to proceed with the risk activity on its own, taking unilaterally such measures of prevention as it deemed appropriate under the circumstances, and further making necessary arrangements for reparation for any significant transboundary harm that arises in case of an accident;[92]

(*e*) The principle of unilateral preventive measures, which obligates the State of origin to take legislative, administrative and other actions to ensure that all appropriate measures are adopted to prevent or minimize the role of transboundary harm of the activity;[93]

(*f*) Finally, Mr. Barboza, like Mr. Quentin-Baxter, noted that the standard of due diligence that should be deemed applicable with regard to the principle of prevention was generally considered to be proportional to the degree of risk of transboundary harm in a particular case. Mr. Quentin-Baxter, however, while putting forward a similar proposition, stated that the standards of adequate protection should be determined with due regard to the importance of the activity and its economic viability. He further stated that standards of protection should take into account the means at the disposal of the acting State and the standards applied in the affected State and in regional and international practice.[94]

H. Draft articles provisionally adopted by the Commission in 1994 and draft articles recommended by its Working Group in 1996

56. Articles adopted provisionally by the Commission in 1994 dealt with prevention in terms of duties of prior authorization (art. 11), risk assessment (art. 12), adoption of legislative, administrative and other actions by States (art. 14), as well as duties to notify and inform (art. 15), to exchange information (art. 16), to provide information to the public (art. 16 *bis*) and to consult (art. 18), the rights of States likely to be affected (art. 19) and factors relevant for achieving an equitable balance of interest (art. 20).

57. The question arose whether measures aimed at preventing further harm, including any measures to be taken by way of restoration or rehabilitation of the situation prior to the incidence of harm caused by an accident, should be regarded as a legitimate part of the concept and duty of prevention.

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the precautionary principle, the "polluter pays" principle and the principle of common but differentiated responsibility in the context of responsibility and liability should also be considered under preventive regimes (art. 13).

[87] See footnote 69 above. For an elaboration of the concept of prevention and in particular the requirement of prior authorization, see article 16 proposed by Mr. Barboza in the annex to his sixth report (footnote 5 above), p. 107; see also article I of the annex to his eighth report (ibid.), p. 67; and his ninth report (ibid.), p. 193, para. 25.

[88] See footnote 46 above.

[89] See footnote 37 above.

[90] See article 11 proposed by Mr. Barboza in the annex to his sixth report (footnote 5 above), p. 107. See also article 10 approved by the Working Group of the Commission in 1996 (footnote 13 above), p. 101. Mr. Barboza noted further: "So far as the draft articles are concerned, when assessing the impact of a particular activity on the environment, health or property of their own population, Governments would also have to take into account the possible transboundary effects." He suggested though that Governments "would undoubtedly delegate this task to the private operators under their jurisdiction or control, and require the latter to provide, at their own cost, the data necessary to make the assessment" (eighth report (footnote 5 above), p. 64, para. 17).

[91] See his sixth report, annex, art. 11 (footnote 5 above), p. 107; see also article 15 proposed in the ninth report (ibid.) and comments thereto, pp. 193–195, paras. 26–38.

[92] Eighth report (footnote 5 above), pp. 65–67, paras. 18–28. Mr. Barboza also suggested in 1992 that obligations of prevention be attached to States and that "it might be more practical to consign all the obligations of prevention (both the procedural obligations and those that have been described as 'unilateral' or as obligations of due diligence) to an annex consisting of purely recommendatory provisions to guide States in better complying with the articles in the main text" (ibid., p. 63, para. 11). However, this suggestion was not found acceptable, and as a result these were reincorporated into the main text of the draft articles. See ninth report (footnote 5 above), p. 190, para. 9.

[93] Barboza, loc. cit., p. 336. See also his comments regarding article 8 on prevention, in his seventh report (footnote 5 above), p. 77, para. 20, and article 16 (ibid., p. 84, para. 45). See also *Yearbook … 1996*, vol. II (Part Two), annex I, commentary to articles 4 and 7 recommended by the Working Group, p. 110, paras. (3) and (4), and p. 117, para. (1).

[94] Fourth report (see footnote 2 above), schematic outline, sect. 5, p. 224.

58. Mr. Barboza had proposed in his ninth report an article 14 which incorporated the concept of prevention *ex post*, placing a duty on the source State to ensure through legislative, administrative or other measures that the operator of a risk-bearing activity took all necessary measures, including the use of best available technology to contain and minimize harm or, in the event of an accident, to cushion the unleashed effect before it reached the border or to adopt other measures to help contain such effects.[95]

59. He elaborated further on the concept of prevention *ex post* and also dealt with the concept of "response" measures in his tenth report. He referred to a number of conventions which dealt with those concepts. With respect to response measures, taking the example of the Convention on the Regulation of Antarctic Mineral Resource Activities, it was suggested that these would include measures of prevention *ex post* as well as some types of measures known as response action, as in the case of clean-up and removal, whose purpose was not to limit or minimize transboundary harm.

60. In order to meet the objection raised by some members of the Commission to the concept of prevention *ex post*,[96] Mr. Barboza proposed to replace it by the concept of response measures and to define the latter only to mean prevention *ex post*: "'Response measures' means any reasonable measures taken by any person in relation to a particular incident to prevent or minimize transboundary harm."[97]

61. The Drafting Committee, which considered the proposal made by Mr. Barboza in article 14 to include measures of prevention *ex post* in the concept of prevention, rejected his view and opted for the approach taken by those members who opposed its inclusion.

62. Accordingly, article 14 provisionally adopted by the Commission in 1994 did not include measures of prevention *ex post* in the concept of prevention. As noted in the commentary, "[t]he expression 'prevention' in this article, pending a further decision by the Commission, is intended to cover only those measures taken before the occurrence of an accident in order to prevent or minimize the risk of the occurrence of the accident".[98]

63. The Commission, however, reversed its position in 1995. It noted that the Special Rapporteur's original proposal of including prevention *ex post* under prevention and not reparation was "prudent and reasonable".[99] The Commission further noted that the same approach had been adopted in several agreements.

64. The Working Group of the Commission reviewed the draft articles on the topic in 1996 and recommended them for adoption by the Commission.[100] In addition, the Working Group adopted article 4 on prevention (a revised version of article 14 provisionally adopted by the Commission in 1994) as a statement of general principle:

> States shall take all appropriate measures to prevent or minimize the risk of significant transboundary harm and, if such harm has occurred, to minimize its effects.[101]

65. It can be seen that the concept of prevention, as adopted, includes measures to be taken to contain and minimize the effects of harm resulting from an accident, in addition to measures required to be taken by way of management of risk prior to any such accident. Thus, the Working Group endorsed the Commission's view that the concept of prevention should include measures of prevention *ex ante* and measures *ex post*.[102]

66. The above-mentioned recent resolution of the Institute of International Law on responsibility and liability under international law for environmental damage referred to the need for the adoption of additional mechanisms like preparation of necessary contingency plans and appropriate restoration (safety) measures directed to prevent further damage and to control, reduce and eliminate damage once it is caused as part of the concept of prevention (art. 14). It further suggested that failure to comply with the obligations on response action and restoration should engage civil liability of operators. Compliance with the obligations, however, would not preclude responsibility for harm actually caused (art. 15). States and other entities undertaking response action or restoration are entitled to be reimbursed by the entity liable for the cost incurred (art. 16).

67. Together with article 6 on cooperation, article 4 recommended by the Working Group provides the basic foundation for the remaining articles on prevention. The obligation for prevention extends to taking appropriate measures to identify activities creating a risk of causing significant transboundary harm. This is an obligation which is of a continuing character.

68. The obligation involved in article 4 is an obligation of conduct and not of result. Accordingly, the State is obliged to take the necessary legislative, administrative and other actions for enforcing its laws, decisions and policies. This also involves an obligation of due diligence, which is defined by a standard broader than the "national standard".[103] As noted in the

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[95] Ninth report (footnote 5 above), p. 192, para. 19.

[96] Tenth report (footnote 5 above), p. 132, para. 7.

[97] Ibid., p. 133, para. 22.

[98] *Yearbook ... 1994*, vol. II (Part Two), p. 170, para. (10) of the commentary to draft article 14.

[99] *Yearbook … 1995*, vol. II (Part Two), p. 87, para. 389.

[100] See articles 9–19 and commentaries thereto, *Yearbook … 1996*, vol. II (Part Two), annex I, pp. 118–129.

[101] Ibid., p. 101.

[102] Mr. Barboza noted in his tenth report (footnote 5 above), p. 132, para. 11:

> "It is thus clear that the concept of prevention is strictly applicable both to activities to avoid incidents that can lead to transboundary harm and to activities to prevent the effects of the incident from reaching their full potential. Prevention of incidents, or prevention *ex ante*, is just one aspect of prevention in general, which would include prevention *ex post*, because the fewer incidents there are, the less harm there will be. It is thus not possible, methodologically, to include in the chapter on reparation actions *ex post* to prevent harm".

[103] The Institute of International Law stated in this respect that the obligation of due diligence must be objectively measured not only in accordance with generally accepted international rules and standards but also in accordance with objective standards relating to the conduct to be expected from a good Government (art. 3 of the resolution on responsibility and liability under international law for environmental

Donoghue v. *Stevenson* case,[104] one "must take reasonable care to avoid acts or omissions which [one] can reasonably foresee would be likely to injure [one's] neighbour". A "neighbour" is one who is closely and directly affected by the act whom one ought reasonably to have in contemplation as being so affected when one is concerned with acts and omissions in question. As observed by the Commission, the due diligence standard must further be directly proportional to the degree of risk of harm. Issues such as the size of the operation, its location, special climatic conditions, materials used in the activity and whether conclusions drawn from the application of these factors in a specific case are reasonable are among the factors to be considered. What is a reasonable standard of care or due diligence may change with time. Accordingly, discharge of the due diligence obligation requires States to keep abreast of technological changes and scientific developments.[105]

69. As stated in the Rio Declaration, standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular, developing countries.[106]

70. The obligation of prevention further obliges a State to undertake unilateral measures to prevent or minimize the risk of significant transboundary harm. Such an obligation requires States to take measures to ensure reduction of harm to the lowest point, consistent with available scientific knowledge and technology as well as economic capacity.

A. Activities coming within

damage) (see footnote 54 above). Failure to enact appropriate rules may not amount to a breach of an obligation but may result in its responsibility if harm ensues as a consequence, including damage caused by operators within the State's jurisdiction and control (art. 4).

[104] United Kingdom, *The Law Reports, House of Lords, Judicial Committee of the Privy Council* (London, 1932).

[105] See the commentary to article 4, *Yearbook …1996*, vol. II (Part Two), annex I, pp. 110–111.

[106] Principle 11 (footnote 37 above). See also principle 23 of the Stockholm Declaration (footnote 18 above). It is the view of the Commission, therefore, "that the level of economic development of States is one of the factors to be taken into account in determining whether a State has complied with its obligation of due diligence" (para. (12) of the commentary to article 4) (see footnote 105 above).

CHAPTER III

Scope of the draft articles

The scope of the topic

71. Identifying activities coming within the scope of the present topic is a task in which the Commission has engaged from the very beginning of its work. Mr. Quentin-Baxter considered that the topic should deal with a wide variety of activities.[107] A majority within the Commission later endorsed the view that the "draft could be limited to transboundary problems pertaining to the physical environment and that questions involving the most delicate problems that might arise in the economic sector could be set aside".[108]

72. Mr. Quentin-Baxter's reference to "the physical environment"[109] had given rise to debate within the Commission and the General Assembly both in 1980 and 1982. In response, the Special Rapporteur stated:

> It should therefore be confirmed that there was never an intention to propose a reduction in the scope of the topic to questions of an ecological nature, or to any other subcategory of activities involving the physical uses of territory; nor, indeed, did any speaker in the Sixth Committee urge the desirability of such a reduction.[110]

73. It is understood that the topic should deal with those activities which have a risk of causing substantial or significant transboundary harm. It was explained by Mr. Quentin-Baxter that the term "risk" in this connection might refer to an inherent danger and might even imply an exceptionally high level of danger a connotation more exactly expressed, in his view, by the term "ultra-hazard". Further, an "ultra-hazard" was perceived as a danger that rarely materialized but that might, on that rare occasion, assume catastrophic proportions. It could also include, in his view, dangers such as air pollution that were insidious and might have massive cumulative effects.

74. Accordingly, article 1 proposed by Mr. Quentin-Baxter in his fifth report provided on the scope of the draft articles as follows:[111]

[107] The following activities were mentioned: "use and regulation of rivers crossing or forming an international boundary and avoidance of damage from floods and ice; use of land in frontier areas; spread, across national boundaries, of fire or any explosive force, or of human, animal or plant disease; activities which may give rise to transboundary pollution of fresh water, of coastal waters or of national airspace, or to pollution of the shared human environment, including the oceans and outer space; development and use of nuclear energy, including the operation of nuclear installations and nuclear ships and the carriage of nuclear materials; weather modification activities; overflight of aircraft and space objects involving a risk of accidental damage on the surface of the earth, in airspace or in outer space; and activities physically affecting common areas or natural resources in which other States have rights or interests." (Fourth report (footnote 2 above), p. 202, footnote 8)

[108] See the remarks of the Chairman of the Commission, Mr. Paul Reuter, when introducing the Commission's report in the Sixth Committee at the thirty-seventh session of the General Assembly (*Official Records of the General Assembly, Thirty-seventh Session, Sixth Committee*, 37th meeting, para. 12). Although some delegations in the Sixth Committee were disappointed, most were of the same opinion as the majority of the Commission (fourth report (footnote 2 above), p. 204, para. 12).

[109] Third report (footnote 2 above), p. 61, para. 48.

[110] Fourth report (footnote 2 above), p. 206, para. 17.

[111] Fifth report (footnote 2 above), p. 155.

The present articles apply with respect to activities and situations which are within the territory or control of a State, and which give rise or may give rise to a physical consequence affecting the use or enjoyment of areas within the territory or control of any other State.

The word "situation" was further explained to mean "a state of affairs, within the territory or control of the source State, which gives rise or may give rise to physical consequences with transboundary effects".[112] The Commission took the view at an early stage of its work that the scope should not be settled or narrowed until the content could be evaluated.[113]

75. Mr. Barboza approached the problem from a different angle. According to him, the concept of danger inherent in the concept of risk

is not absolute, but relative. It could vary, for example, according to the geographical location of the activity in question: location in the interior of a country with extensive territory is not the same as in a smaller country, or near a border, or on an international river, or in an area where there are steady or prevailing winds.[114]

76. Moreover, he felt that the articles of the proposed draft would apply "even if the risk were not foreseeable in the general sense, provided that the full scope of that risk was known to the State of origin".[115]

77. As regards situations of the type referred to in article 1 proposed by Mr. Quentin-Baxter, Mr. Barboza noted that there were two types of such situations: first, those arising from a human activity, for example, the construction of a dam or the accumulation of highly toxic materials; and secondly, those arising naturally in the absence of human activity, for example, spontaneous forest fires, pests, floods and the like. According to him, only situations of the first type would fit within the regime because they arise from activities involving risk[116] and not the latter which would come under the regime of responsibility for an act or omission in respect of the situation.[117] In this case, however, the State may absolve itself from any liability by demonstrating that it had employed all the means at its command to prevent it.[118]

78. As for activities that cause harm in the normal course of their operation, Mr. Barboza felt that they amounted to a continuous violation of the obligation of a State to prevent all significant (i.e. above a threshold of tolerance) transboundary harm caused by intentional or negligent State conduct. Accordingly, in his view, such a violation would amount to a wrongful act involving State responsibility.[119]

79. Mr. Barboza also endorsed the various conclusions drawn by the Commission during the time of Mr. Quentin-Baxter on the scope of the topic, which included three limitations or criteria: first, the transboundary element: effects felt within the territory or control of one State must have their origin in an activity or situation which takes place within the territory or control of another State; secondly, the element of a physical consequence: this involves a connection of a specific type, i.e. the consequence has to stem from the activity in question by reason of natural law. Thus, the causal relationship between the activity and the harmful effects has to be established through a chain of physical events. Thirdly, in keeping with the *Lake Lanoux* decision, these physical events must have social repercussions.[120]

80. Rejecting suggestions to expand the scope to include economic and social activities, Mr. Barboza reiterated that the topic should be confined to those activities with physical consequences where a cause-and-effect relationship could easily be established between the activity and the injury.[121]

81. While Mr. Barboza recommended several different formulations on the scope of the draft articles, the one provisionally adopted in 1994 read as follows:

The present articles apply to activities not prohibited by international law and carried out in the territory or otherwise under the jurisdiction or control of a State which involve a risk of causing significant transboundary harm through their physical consequences.[122]

82. The Commission considered the matter of the scope of the topic but could not arrive at any final conclusion on the type of activities required to be encompassed. At its forty-seventh session, in 1995, the Commission established a Working Group on the identification of dangerous activities.[123] It reviewed the ways in which the scope of some multilateral treaties dealing with transboundary harm and with liability and prevention had been defined in terms of the activities or substances to which they applied. The Working Group recognized that, while a precise definition of activities might be difficult to achieve, at some

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[112] Ibid., p. 166, para. 31.

[113] Fourth report (footnote 2 above), p. 204, para. 10.

[114] Third report (footnote 5 above), p. 49, para. 10.

[115] Ibid., p. 50, para. 14.

[116] Mr. Barboza noted moreover that several factors engendered responsibility in respect of human activities: "unjust enrichment, a disruption of the balance of rights and interests of States, and accordingly a violation of the principle of equality of States before the law." (Ibid., p. 51, para. 28)

[117] Ibid., paras. 25–26.

[118] Ibid., para. 30.

[119] See Barboza, loc. cit., p. 319. Zemanek distinguished between those activities which cause injury only in the event of an accident and those which permanently cause the emission of harmful substances and concluded that in the latter case, while society seems to accept a certain degree of pollution, if the limit established was exceeded either by accident or by a change in technical standards, the resulting damage must be compensated for ("La responsabilité des États pour faits internationalement illicites, ainsi que pour faits internationalement licites", p. 17, cited in Mr. Barboza's second report (footnote 5 above), p. 151, footnote 32). Handl excluded activities which involve permanent emissions of harmful substances from the scope of the present topic. In his view, "where States intentionally discharge pollutants in the knowledge that such discharge is bound to cause, or will cause with substantial certainty, significant harmful effects transnationally, the source State will clearly be held liable for the resulting damage. The causal conduct will be deemed internationally wrongful. Most cases of injurious transboundary environmental effects involve continuous transboundary pollution. Most of these situations consequently intrinsically involve questions of State responsibility" ("Liability as an obligation established by a primary rule of international law: some basic reflections on the International Law Commission's work", pp. 58–59, cited in Mr. Barboza's second report (footnote 5 above), p. 152, footnote 33).

[120] *Yearbook ... 1987*, vol. II (Part Two), p. 40, para. 126.

[121] Ibid., p. 44, para. 155.

[122] *Yearbook ... 1994*, vol. II (Part Two), p. 161. For an earlier formulation proposed on a trial basis by Mr. Barboza as draft article 2 giving a list of dangerous substances, see his sixth report (footnote 5 above), pp. 87–89, paras. 15–21, and annex, p. 105. It is noted that the "Sixth Committee was not generally favourable to the idea of a list of dangerous substances". See his seventh report (footnote 5 above), p. 79, para. 26.

[123] *Yearbook … 1995*, vol. II (Part Two), p. 89, para. 405.

stage it would be useful to specify a list of activities. However, it took the view that the work of the Commission could proceed for the time being taking into consideration the type of activities listed in various conventions dealing with the issues of transboundary harm, as for example, the 1991 Convention on Environmental Impact Assessment in a Transboundary Context, the 1992 Convention on the Transboundary Effects of Industrial Accidents and the 1993 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment.

83. The Commission accepted these conclusions. Further, it felt that the specification of the activities falling within the scope of the subject would depend upon the provisions on prevention to be adopted by the Commission and the nature of the obligations involved.[124]

84. The Working Group of the Commission accordingly proposed in 1996 that article 1 read as follows:

> The present articles apply to:
>
> (*a*) Activities not prohibited by international law which involve a risk of causing significant transboundary harm [; and
>
> (*b*) Other activities not prohibited by international law which do not involve a risk referred to in subparagraph (*a*) but none the less cause such harm;]
>
> through their physical consequences.[125]

85. While the members of the Working Group had different reasons for doing so, they all supported the view that at the current stage there was no need to spell out the activities to which the draft articles applied. The article thus recommended covers those activities which involve a "risk of causing significant transboundary harm".[126] Moreover, the element of "risk" was intended to limit the scope of the topic and excluded those activities which caused transboundary harm in their normal operation, such as, for example, creeping pollution.[127]

86. The criterion of "physical consequences", as has already been explained, would exclude transboundary harm caused by State policies in monetary, socio-economic or similar fields. It implies a connection of a very specific type. It means that the activities covered in these articles must themselves have a physical quality and the consequences must flow from that quality, not from an intervening policy decision.

B. The concept of significant harm: the question of a threshold

87. In defining the scope of the topic, a further question arises as to the type of harm that is required to be prevented. It is admitted that a certain level of harm is inevitable in the normal course of pursuing various developmental and other beneficial activities where such activities have a risk of causing transboundary harm. However, it is equally admitted that substantial transboundary harm is to be avoided or prevented by taking all measures practicable and reasonable under the circumstances. This was the approach taken by the Montreal Rules adopted by ILA.[128] It was thus recognized that "it is impossible to formulate a general rule of international law fixing a level at which the damages produced by transfrontier pollution can be deemed to be substantial".[129] As has been pointed out, the "yardstick must rather be determined in the light of the technical standard and the level of pollution generally accepted in the region concerned or even of the level of general damage caused by human influence on the environment".[130]

88. Mr. Quentin-Baxter, while approvingly quoting the above position of ILA, further made the point that "the responsibility of the source State will not be engaged unless the State authorities had the means of foreseeing that loss or injury was likely to be caused, as well as the duty to prevent its occurrence".[131] Moreover, he observed that, while the occurrence of loss or injury was a pure question of fact, "its legal significance has to be estimated in whatever context the States concerned have themselves provided".[132] In other words, if States concerned were not to regard the kind of loss or injury that occurred as giving rise to any right of reparation, that circumstance would clearly be decisive of any claim. In this sense, identifying or fixing the level at which harm is to be regarded as substantial or significant is not entirely a function of arriving at the same through pure scientific evidence and technique, even though inputs from that angle would not only be desirable but necessary.

89. The above theme reflected the policy of the schematic outline presented by Mr. Quentin-Baxter. Accordingly, the important objective of the scheme was to promote agreements between States in order to reconcile, rather than inhibit, activities which were predominantly beneficial, despite some nasty side effects. It was further recommended that such agreements should aim at mutual accommodation rather than mutual restriction, offer adequate safeguards and arrange for a better distribution of cost and benefits.[133] It was therefore suggested that agreements to be entered into between States might deal with (*a*) the way in which a loss or injury should be characterized, and whether the kind of loss or injury was foreseeable; (*b*) whether the loss or injury was substantial; and (*c*) whether the quantum of reparation was affected by the question of sharing, or by a change in the circumstances that existed when the activity which gave rise

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[124] Ibid., para. 408. For the view that the articles on prevention should essentially be directed at the establishment of an environmental impact assessment system and that the activities to which they applied should be described in precise detail, see *Yearbook ... 1993*, vol. II (Part Two), p. 24, para. 119.

[125] *Yearbook … 1996*, vol. II (Part Two), annex I, p. 101.

[126] For a definition of "risk of causing significant transboundary harm", see article 2 (ibid.).

[127] *Yearbook … 1994*, vol. II (Part Two), p. 164, para. (21) of the commentary to article 1.

[128] ILA, *Report of the Sixtieth Conference, Montreal, 1982* (London, 1983), pp. 1–3, resolution No. 2 1982 on legal aspects of the conservation of the environment, adopted by ILA at its Sixtieth Conference, held at Montreal, Canada, from 29 August to 4 September 1982.

[129] Paragraph 8 of the comments on article 3 submitted by the Committee on Legal Aspects of the Conservation of the Environment, ibid., p. 162, cited in Mr. Quentin-Baxter's fourth report (see footnote 2 above), p. 209, para. 27.

[130] Paragraph 9 of the comments on article 3, ibid., p. 163.

[131] Fourth report (footnote 2 above), pp. 209–210, para. 28.

[132] Third report (footnote 2 above), p. 57, para. 27.

[133] Ibid., pp. 59–60, paras. 37 and 39.

to the loss or injury was established.[134] Furthermore, in order to assist States, section 6 of the schematic outline provided a list of factors which could be taken into consideration by way of balancing the interests involved.

90. Mr. Quentin-Baxter therefore concluded that "[n]ot all transboundary harm is wrongful; but substantial transboundary harm is never legally negligible". Thus,

> [o]n the scale of harm, what lies on the far side of the point of wrongfulness is prohibited; and disobedience of that prohibition engages the rules of State responsibility. On the near side of the point of wrongfulness, activities which generate, or threaten to generate, substantial transboundary harm are carried on subject to the interests of other States. Those interests may be quantified ... or they may be at large.[135]

91. Mr. Barboza also generally agreed with Mr. Quentin-Baxter. He hoped that, with respect to activities involving a risk of causing transboundary harm, "injury was the consequence of lawful activities and had to be determined by reference to a number of factors". "When building a régime", he added, "States might negotiate the extent of the injury flowing from the activities contemplated in the agreement and thus resolve, among themselves, the question of the threshold of injury above which the liability of a State would be engaged".[136] Some members of the Commission and delegations in the Sixth Committee agreed with the approach that the concept of danger was relative and that it was for the States to identify the levels at which it could be regarded as "substantial", while others preferred a clearer indication of the concept of injury or the definition of "substantial harm" by giving reference to specific types of dangerous but lawful activities or substances.

92. Even though Mr. Barboza was of the view that no specific list or specification of dangerous substances could be attempted satisfactorily to define the concept of injury and hence the scope of the present topic, in order to accommodate the persistent view of some, he explored the possibility of listing not activities but substances which were inherently dangerous so that certain activities relating to them would most likely carry the risk of causing transboundary harm.[137]

93. Mr. Barboza's above proposal elicited three general views within the Commission: some members welcomed the list of substances, three members approved it only if such a list were to be exhaustive, and yet other members did not agree with formulating any list. In view of this, as a further clarification, Mr. Barboza observed that a list of such dangerous activities or substances would not in any case eliminate the need for an assessment of the risk involved on the basis of many factors which had to be taken into account. He pointed out that such factors could include: the type or source of energy used in a manufacturing activity, the substances manipulated in production, the location of the activity and its proximity to the border area, the vulnerability of the zones of affected States situated within the reach of the effect of an activity, etc.[138]

94. Article 2 (*a*) provisionally adopted by the Commission in 1994 defined "risk of causing significant transboundary harm" as encompassing "a low probability of causing disastrous harm and a high probability of causing other significant harm". This formulation treated threshold as a combined effect of risk and harm instead of separately dealing with "risk" and "harm" and required that such a combined effect should reach a level that was deemed significant.

95. The above formulation was later approved in 1996 by the Working Group of the Commission, which felt that obligations of prevention imposed on States should not only be reasonable but also sufficiently limited, as the activities under discussion were not prohibited by international law; there was a great need to reconcile the freedom of States in utilizing resources within their own territories for the development and benefit of their population with the requirement not to cause significant harm to other States.[139]

96. The proposed definition includes activities having a high probability of causing harm which, while not disastrous, are still significant. It would also include activities which have a low probability of causing disastrous harm, i.e. ultrahazardous activities. It would, however, exclude activities where there is a very low probability of causing significant transboundary harm.

97. The concept of "significant harm" was further clarified to mean something more than "detectable" or "appreciable" but not necessarily "serious" or "substantial". The harm must lead to real detrimental effects on such aspects as human health, industry, property, environment or agriculture in other States, which could be measured by fac-

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[134] Fourth report (footnote 2 above), p. 217, para. 54.

[135] Second report (footnote 2 above), p. 117, paras. 59–60.

[136] *Yearbook ... 1987*, vol. II (Part Two), pp. 40–41, para. 127.

[137] See article 2, annex to the sixth report (footnote 5 above), p. 105. See also pages 87–89, paras. 15–21 (ibid.).

The model adopted by Mr. Barboza for this purpose was based on a draft prepared by the Committee of Experts on Compensation for Damage caused to the Environment for the European Committee on Legal Cooperation of the Council of Europe on State liability for dangerous activities. That draft defined dangerous substances as those which created a significant risk of harm to persons or property or the environment such as flammable and corrosive materials, explosives, oxidants, irritants, carcinogens and toxic, ecotoxic and radiogenic substances as indicated in an annex. See Council of Europe, secretariat memorandum prepared by the Directorate of Legal Affairs (CDCJ (89) 60), Strasbourg, 8 September 1989.

Schwebel suggested that only a certain type of harm that had an impact of some consequence, for example, for health, industry, agriculture or environment, in the affected State or affected transboundary areas would require to be prevented. According to another observation, transboundary harm involving radiological, toxic or otherwise highly dangerous substances tended to be counted automatically as significant transboundary harm and hence should be prevented. See Handl, "National uses of transboundary air resources: the international entitlement issue reconsidered", p. 420. It may also be observed that different standards are prescribed as safe levels for clean air, drinking water or exposure to heat or radiation. Similarly, the levels of pesticides and chemicals used in agriculture or other fields have also given rise to standards of safe use.

[138] See *Yearbook ... 1990*, vol. II (Part Two), pp. 92–93, paras. 479–483; and Barboza, loc. cit., p. 335.

[139] *Yearbook … 1996*, vol. II (Part Two), pp. 107–108, para. (2) of the commentary to article 2. Mr. Quentin-Baxter had observed:

> "It is important, as a matter of legal policy, that duties of reparation should not be separated from, or substituted for, duties of prevention. Treaty regimes provide ample evidence that compensation is a less adequate form of prevention—prevention after the event. It is a justified way of filling gaps when full prevention is not possible—either in absolute terms or in terms of the economic viability of a beneficial activity; but it should not be allowed to become a tariff for causing avoidable harm."

(Second report (footnote 2 above), p. 123, para. 91)

tual and objective standards. It was also suggested that, considering that the activities involved are not prohibited by international law, "the threshold of intolerance of harm cannot be placed below 'significant'".[140]

98. The term "significant" thus denotes factual and objective criteria and involves a value judgement which depends on the circumstances of a particular case and the period in which such determination is made. In other words, a deprivation which is considered to be significant at one time may not be regarded so later.[141]

C. The criterion of transboundary harm: the concept of territory, control and jurisdiction

99. It may be recalled that Mr. Quentin-Baxter had proposed five draft articles in 1984 in his fifth report, article 1 of which defined the scope of the articles,[142] i.e. activities or situations which are within the territory or control of a State and which give rise or may give rise to a physical consequence affecting the use or enjoyment of areas within the territory or control of other States.

100. The terms "territory or control" were defined in article 2, paragraph 1, as follows:

(*a*) In relation to a coastal State, as extending to maritime areas insofar as the legal regime of any such area vested jurisdiction in that State in respect of any matter;

(*b*) In relation to a State of registry, or flag State, of any ship, aircraft or space object, as extending to the ships, aircraft and space objects of that State while exercising a right of continuous passage or overflight through the maritime territory or airspace of any other State;

(*c*) In relation to the use or enjoyment of any area beyond the limits of national jurisdiction, as extending to any matter in respect of which a right was exercised or an interest asserted.[143]

101. The definition thus proposed by Mr. Quentin-Baxter includes first the land territory over which a State enjoys sovereignty, the maritime zones over which the coastal State enjoys sovereignty, sovereign rights or exclusive jurisdiction and the airspace above its territory or territorial sea under its jurisdiction. It also takes into account the jurisdiction a State enjoys as a flag State over ships, aircraft and space objects when they operate on the high seas or in the airspace. The right of jurisdiction and control enjoyed by the coastal State is subject to the right of innocent passage enjoyed in the territorial sea. Further, the jurisdiction and control of the flag State in the high seas or in outer space is subject to the requirement of reasonable use to accommodate similar rights of other flag States.

102. In addition, it may also be noted that the exercise of sovereign rights or exclusive jurisdiction could also be subject to any other relevant principles of international law, treaties or other arrangements agreed to or entered into between two States.[144]

103. Thus defined, the scope of the topic concerned "effects felt within the territory or under the control of a State, but arising as a consequence of an activity or situation occurring, wholly or partly, within the territory or under the control of another State or States".[145]

104. Mr. Barboza, while adopting the above approach, also referred to the concept of control as including the situation referred to by ICJ in the *Namibia* case.[146] It may be recalled that the Court, after holding South Africa responsible for having created or maintained a situation which it had declared illegal and finding South Africa under an obligation to withdraw its administration from Namibia, nevertheless attached certain legal consequences to the de facto control over Namibia. It further stated that "[p]hysical control of a territory, and not sovereignty or legitimacy of title, is the basis of State liability for acts affecting other States".[147]

105. In the light of the above, the draft articles provisionally adopted by the Commission in 1994 limited the scope to activities "carried out in the territory or otherwise under the jurisdiction or control of a State" (art. 1) and defined further transboundary harm as "harm caused in the territory of or in other places under the jurisdiction or control of a State other than the State of origin, whether or not the States concerned share a common border" (art. 2 (*b*)). It was explained that even though the expression "jurisdiction or control of a State" was "a more commonly used formula in some instruments", it was also found useful to mention the concept of territory in order to emphasize the territorial link, when such a link existed between activities under those articles and a State.[148]

106. Mr. Barboza dealt with the problem of extending the scope of the present topic to activities which harmed the global commons per se in his sixth report in 1990. He felt that harm to the environment per se as an independent ground for liability was something new and that, if such harm was to be measured on the basis of its impact on persons or property, it was difficult, at the current state of scientific development, to measure with a sufficient degree of precision what identifiable harm to the global commons would result in identifiable harm to human beings or property. He explained that, even though an overall correlation could be made between harm to the global commons, the environment in general and the well-being and quality of life of human beings, that did not seem to be enough to establish the causal link necessary under the international liability topic as currently formulated. He noted that this would require, perhaps, a different definition of harm and

[140] *Yearbook … 1996*, vol. II (Part Two), annex I, p. 108, paras. (4) and (5) of the commentary to article 2. The Working Group also defined significant harm as one that is not *de minimus* or that is not negligible. The commentary noted a number of examples where the idea of a threshold is reflected using "significant", "serious", or "substantial" as relevant criteria (ibid., para. (6)).

[141] Ibid., pp. 26–27, para. (7).

[142] Fifth report (footnote 2 above), p. 155.

[143] Ibid.

[144] Ibid., pp. 157–158.

[145] Ibid., p. 157, para. 7.

[146] *Yearbook ... 1987*, vol. II (Part Two), p. 45, para. 163.

[147] *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971*, p. 54, para. 118.

[148] *Yearbook ... 1994*, vol. II (Part Two), pp. 161–162, para. (4) of the commentary to article 1.

a different threshold of harm.[149] He pointed out a further difficulty: in the case of harm to the global commons, the determination of the affected States would remain uncertain. It was noted that only one convention came close to imposing liability for harm to the environment per se, namely, the Convention on the Regulation of Antarctic Mineral Resource Activities, which showed that the matter was of only very recent origin.

107. According to Mr. Barboza, a review of State practice seemed to indicate that harm to the global commons had been dealt with through identification of certain harmful substances or areas of the global commons and making them subject to suitable regulations, such as restricting or banning the use of certain substances or banning any activity which would cause harm to certain parts of the global commons. This trend, in Mr. Barboza's view, indicated that the problem was better dealt with under the topic of State responsibility.[150]

108. Several members of the Commission also addressed the problem of the global commons. While everyone agreed that the problem of the continuous deterioration of the global commons was a serious matter, some members felt that the question should not be dealt with within the current topic. They noted that the subject raised difficulties in determining the State or States of origin, the affected State, as well as the assessment and determination of harm. In addition, they referred to the right to compensation and the obligation of prevention of harm which were difficult to implement if no single State could be identified as the affected State or the source State. Further, while some of them felt that the subject could be dealt with separately under the long-term programme of the Commission, others thought that the time was not yet ripe for the Commission to consider the topic.

109. Another group of members, however, felt that the matter required serious attention and that the concept of harm to the global commons was increasingly finding expression in numerous international and regional forums and decisions. According to them, the principles of common concern of mankind and of the protection of intergenerational equities being developed within the context of sustainable development and environmental law provided the content of the concept of harm to the global commons. For these reasons, a few members suggested that the topic of the global commons should be taken up separately by the Commission without delay.[151]

110. In view of the above, article 2 (*b*) provisionally adopted by the Commission in 1994 excluded activities which caused harm only in the territory of the State within which the activity had been undertaken or those activities which harmed the global commons per se but without any harm to any other State.[152]

[149] *Yearbook ... 1990*, vol. II (Part Two), p. 104, para. 527.

[150] Ibid., para. 529.

[151] *Yearbook ... 1991*, vol. II (Part Two), pp. 117–118, paras. 254–259.

[152] *Yearbook ... 1994*, vol. II (Part Two), p. 164.

CHAPTER IV

Scope of the draft articles: conclusions recommended for endorsement

111. The work of the Commission on the matter of the scope of the draft articles on international liability arising out of acts not prohibited by international law has culminated in some important conclusions on the activities to be covered, on the threshold of harm or damage required for triggering the obligation and on specifying or clarifying the concept of "transboundary damage". These conclusions are relevant for the purpose of the present assignment even though it is to be limited only to the consideration of the question of the duty of prevention and will not extend to the question of liability. Accordingly, they may be noted and endorsed:

(*a*) Article 1 (*a*) proposed by the Working Group of the Commission in 1996 emphasizes that the draft articles are limited, in their application, to those activities which involve a risk of causing significant transboundary harm through their physical consequences. That is, activities covered and the resulting transboundary consequences must have a physical quality, where a relationship between cause and effect could be established. Accordingly, harm caused by State policies in monetary, socio-economic or similar fields would be excluded;

(*b*) Also excluded are activities which result in significant transboundary harm over a period of time after interaction with various other factors, i.e. harm caused due to creeping pollution or harm arising from multiple sources where a strict chain of cause and effect cannot be established;

(*c*) It is equally clear, as our focus is on activities involving a *risk* of causing transboundary harm, that activities which actually or continuously cause significant harm in their normal operation are also excluded;

(*d*) Harm or damage required to be prevented is only significant harm or damage. That is, damage which is minimal or negligible and which is only detectable or appreciable but no more, is not covered. Activities which have a low probability of causing disastrous harm, i.e. ultrahazardous activities, are covered, as are those which have a high probability of causing other significant harm, i.e. hazardous activities. Accordingly, activities which have a very low probability of causing significant transboundary harm are not covered;

(*e*) Establishing a threshold of harm and actually defining what is significant in respect of particular activities is a function of scientific, temporal and political factors among other things. While scientific and technical input in identifying significant harm with respect to a given activity is important, what is not tolerated and hence "significant" is a function of accommodating conflicting but sometimes legitimate and multiple interests. Standards involved could vary from country to country and region to region as well as in time.[153] In establishing a threshold of significant harm, the combined effect of "risk" and "harm" would be the determining factor;

(*f*) The scope of the articles is to be limited to activities carried out in the territory or otherwise under the jurisdiction or control of the State having a risk of causing significant harm in the territory of or in other places under the jurisdiction or control of the State other than the State of origin, *whether or not the States concerned share a common border*. While the concept of jurisdiction or control is noted, the territorial link should be emphasized wherever such link exists between activities under consideration and a State. Further, the various concepts involved, i.e. "territory", "control" or "jurisdiction", have to be understood in accordance with the meaning given to them under relevant principles of international law, treaties or other arrangements agreed to or entered into between States. With respect to "control", it is the physical control of a territory and not sovereignty or legitimacy of title which would set in motion relevant obligations;

(*g*) Further, harm caused to the global commons which did not have social repercussions or effects upon persons or property or the interests of a State, where cause and effect cannot be linked, i.e. harm caused to the global commons per se, is also excluded from the scope of the present exercise;

(*h*) Activities excluded from the scope of the present exercise which result in significant harm are regulated in accordance with the applicable principles of international law or require regulation in accordance with legal regimes to be developed separately.

112. If the above conclusions are accepted, articles 1 (*a*) and 2 as proposed by the Working Group in 1996 could be endorsed without any further amendment. However, article 1 (*b*) dealing with activities which actually cause harm would have to be deleted. This provision was in any case placed within square brackets for further consideration at that time and the above review of the matter would indicate that these types of activities should be dealt with under the regime of State responsibility and not within the present topic.

113. The Special Rapporteur urges the Commission to consider and approve the above conclusions as the issues involved have been thoroughly debated over the past several years. They represent the opinion of a wide majority both in the Commission and in the Sixth Committee. Accordingly, these conclusions offer, in the opinion of the Special Rapporteur, a realistic chance of achieving consensus if not complete agreement.

[153] According to Schachter, identification of thresholds defining significant harm could vary from activity to activity and from region to region, depending upon the vulnerability involved as well as the options available in meeting the vital needs of the population. Accordingly, the threshold of significant harm could vary from a country which was highly developed to another country which is desperately seeking development (see *International Law in Theory and Practice*, p. 368). As discussed above, Mr. Quentin-Baxter had earlier come to a similar conclusion when he stated that standards of protection should take into account the means at the disposal of the acting State and the standards applied in the affected State and in regional and international practice (sect. 5 of the schematic outline, fourth report (footnote 2 above), pp. 224–225). He also noted that suggesting a standard was no longer a problem; the real problem was the application of standards by States which were at diverse levels of socio-economic and scientific development. It followed, according to this view, that the due diligence obligation was largely based on the capability of States to prevent the harm. As such, prevention as a principle has been applied differently in different regimes (see Sands, *Principles of International Environmental Law I*, p. 356). After surveying a number of international instruments, Sands observed that the identification and evaluation of substances, technology, processes and categories of activities which had or were likely to have significant adverse impact on the environment were, therefore, left to sovereign States. Moreover, the liability for the non-observance of that obligation arose only when the significant harm had resulted and not before.

PART TWO. THE CONCEPT OF PREVENTION: PRINCIPLES OF PROCEDURE AND CONTENT

114. Given the nature of the concept of prevention and the clarification of the scope of the topic presented in part one, a regime of prevention of significant transboundary harm arising out of dangerous activities could be organized around several principles of procedure and content. Principles of procedure might include those of: (*a*) prior authorization; (*b*) environmental impact assessment; (*c*) notification, consultation and negotiation; (*d*) the principles of dispute prevention or avoidance and settlement; and (*e*) non-discrimination. The principles of content might include those of: (*a*) precaution; (*b*) polluter-pays; and (*c*) equity, capacity-building and good governance.

CHAPTER V

Principles of procedure

A. The principle of prior authorization

115. The duty not to cause significant transboundary harm and to prevent any such harm carries with it the requirement that activities bearing such risk should not be allowed by a State within its territory without its prior authorization. The requirement of prior authorization is thus an important element of the principle of prevention.[154]

116. This requirement was identified by Mr. Barboza when he presented article 16 in his sixth report which dealt with unilateral preventive measures. It was repeated in his subsequent reports. However, starting with his ninth report, he dealt with the principle of prior authorization in a separate and independent article to highlight its importance. Thus, article 11 provisionally adopted by the Commission in 1994 stated:

> States shall ensure that activities referred to in article 1 are not carried out in their territory or otherwise under their jurisdiction or control without their prior authorization. Such authorization shall also be required in case a major change is planned which may transform an activity into one referred to in article 1.[155]

117. The same text was adopted as article 9 by the Working Group in 1996. The requirement of prior authorization implies that the granting of such authorization is subject to the fulfilment of necessary conditions and qualifications to ensure that the risk involved is properly assessed, managed and contained. It is up to each State to freely choose and prescribe methods and means to make this determination before granting the authorization. In addition, the requirement of prior authorization would also oblige States to put in place an appropriate monitoring machinery to ensure that the risk-bearing activity is conducted within the limits and conditions prescribed at the time it is authorized. For this purpose, States are required to adopt necessary legislative and administrative requirements. Such legislation could indicate the type of activities which would require prior authorization from the State.[156]

118. The requirement of prior authorization and the consequent requirement of seeking an environmental impact assessment statement would also apply in the case of any major change contemplated in the proposed activity after the granting of authorization which might transform the activity into one creating a significant risk of transboundary harm. This has been, in particular, provided under article 1 (*v*) of the 1991 Convention on Environmental Impact Assessment in a Transboundary Context. However, the Convention did not define the concept of "major change", and the decision on the applicability of that instrument will therefore be partly based on judgement. The basic criterion could be that the existing activity subject to a major change is included in appendix I to the Convention and that authorization from a competent authority is required for that change.[157] The following are some examples of major changes: building of additional production capacities, large-scale employment of new technology in an existing activity, re-routing of motorways, express roads or an airport runway changing the direction of take-off and landing. Consideration would also have to be given to a change in investments and production (volume and type), physical structure or emissions. It is also suggested that it would be worthwhile to examine cases where the major change would represent an increase of the same magnitude as the threshold specified in appendix I to the Convention or of a threshold proposed as

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[154] The requirement of prior authorization differs from the requirement of prior informed consent. The latter was developed in the context of the export of hazardous wastes or chemicals or other substances from one country to another. It provides that the importing State must give its consent before the hazardous product is exported from the country of origin. Such consent should be sought and received by the entities concerned by providing to the importing State full information on the product with a view to safeguarding the health and environment of the importing State. In the case of export of dangerous or hazardous substances, it is also provided that the country of origin should, as far as possible, ascertain before such export that the country of import has the necessary means and capacity to treat and deal with the hazardous substance intended for export. The prior informed consent requirement was used in non-binding instruments elaborated in the framework of UNEP and FAO and integrated into legally binding arrangements for international trade in hazardous wastes, such as the 1989 Basel Convention on the control of transboundary movements of hazardous wastes and their disposal, the 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa and the 1993 EEC Regulation on the supervision and control of shipments of waste within, into and out of the European Community. For these and other considerations, see Handl and Lutz, *Transferring Hazardous Technologies and Substances: The International Legal Challenge*; see also Sands, op. cit., pp. 464–467.

[155] *Yearbook ... 1994*, vol. II (Part Two), p. 159.

[156] See the commentary on article 11 on the requirement of prior authorization (ibid., p. 166). It may be noted that the Working Group proposed in its commentary that the requirement of prior authorization should be considered as creating a presumption that the activities covered by the draft articles are taking place in the territory or otherwise under the jurisdiction or control of a State with the knowledge of that State (*Yearbook … 1996*, vol. II (Part Two), annex I, p. 118, para. (3) of the commentary to article 9). Mr. Barboza in the annex to his sixth report proposed an article on assignment of obligations (art. 3) which stipulated that the State of origin had the obligation of reparation provided that it knew or had means of knowing that a relevant activity was being or was about to be carried out in its territory or in other places under its jurisdiction or control. It further provided that unless there was evidence to the contrary, it was to be presumed that the State of origin had the knowledge or the means of knowing that activities in question were being carried out in its territory (footnote 5 above). Members of the Commission had raised doubts as to the idea that the liability of a State was contingent upon the fact of knowledge or the means of establishing such knowledge. It was pointed out that such a concept of liability should be proportional to the effective control of the State or other entities operating within its control or jurisdiction and, more importantly, to the means at their disposal to prevent, minimize or redress harm. In order to take these considerations into account, particularly the circumstances of developing countries having vast territories and insufficient financial and administrative means to monitor activities in their territories, the Special Rapporteur introduced the above term "presumption" under article 3. This "presumption" is to be considered only in the case of a regime on liability, and even in that context it does give rise to some differences of opinion as to its relevance.

[157] See *Current Policies, Strategies and Aspects of Environmental Impact Assessment in a Transboundary Context* (United Nations publication, Sales No. E.96.II.E.11), p. 48.

appropriate. Particular consideration could also be given to cases where the proposed changes would bring existing activities to such thresholds.[158]

B. The principle of international environmental impact assessment

119. The duty to prevent significant transboundary harm involves the requirement of assessing whether a particular activity actually has the potential of causing such significant harm. In order to assess the potential harm involved, the practice of requiring a statement on environmental impact assessment (EIA) has become very prevalent.[159]

120. The legal obligation to conduct an EIA under national law was first developed in the United States of America in the 1970s. Later, Canada and Europe adopted the same approach and essentially regulated it by guidelines. In 1985, a European Community directive required member States to conform to a minimum requirement of EIA. Since then many other countries have also made EIA a necessary obligation under their national law before authorization is granted for developmental or hazardous industrial activities.[160]

121. It is desirable that the evaluation of the environmental consequences of any proposal be addressed at the earliest appropriate stage of decision-making and given the same attention as economic and social concerns. This ideally applies not only to private projects but also to those of Governments so that principles of ecological sustainability are built into key government decisions at all levels, wherever the possibility of a significant environmental impact cannot be reasonably excluded. Environmental assessment procedures for policies, plans and programmes should as much as possible reflect the principles of EIA that are applied to projects. However, environmental assessment of a policy, plan or programme should not be a substitute for EIA at the project level.

122. The principles of environmental assessment are usually specified in the principal act. They may also be specified in subordinate legislation either by regulation or by administrative procedures. A large number of developing countries seem to agree that "an EIA programme is best implemented under statutory authority".[161] If the environmental assessment process is embodied in regulations, then any violation thereof is a violation of law. However, if it is embodied in administrative procedures, they may be enforceable as law only if this is clearly provided in the principal legislation. Delegated legislations such as regulations, rules and by-laws are justiciable. Administrative procedures, however, are more like instructions and do not create legally enforceable obligations.[162]

123. National legislations on EIA address, in particular, the following points:

(*a*) The proposals or activities calling for EIA;

(*b*) The referral of those proposals or activities to the agency;

(*c*) The assessment or scoping (see paragraph 124 below) by the agency of the proposal to determine the environmental implications of that proposal or activity, including the need for an environmental impact statement (EIS);

(*d*) The form an EIS should take, should one be necessary;

(*e*) Public comment on a draft EIS;

(*f*) The preparation of a final EIS and dispute resolution of contentious matters arising in the course of the process;

(*g*) The submission of the EIS together with the comments of various bodies;

(*h*) The decisions and issues, such as monitoring and review requirements, to be taken into account.[163]

124. Tailoring the EIA study to the requirements of a specific activity is known as "scoping". Ideally, scoping should be a joint activity among the proponent, the Government and the public and other interested parties. More commonly, proponents are expected to prepare the report themselves or to pay its preparation by a competent, independent third party. Generally the expense of preparing EIA documents is borne by the proponent and included in the budget of a proposed activity. Similarly, environmental management costs of the activity, after authorization has been received are charged to the proponent's operational budget. The cost of reviewing the EIA documentation and supervising the proponent's implementation of the EIA results is usually borne by the Government.[164]

125. EIA legislation has traditionally been weak in providing for the follow-up to an EIA study. A survey of several national legislations revealed that in the case of such failures, they usually provide for penalties. Typical actionable offences include: failing to perform an EIA before implementing an activity; acting in contravention of the EIA process; concealing, manipulating or providing false information; and causing environmental damage. Violations of legal EIA obligations can result in temporary or permanent suspension of an activity, modification or suspension or revocation of an environmental licence, payment of a fine, compensation for damage, restoration

[158] Ibid.

[159] Ibid., p. vii. According to this United Nations study, EIA "has already shown its value for implementing and strengthening sustainable development, as it combines the precautionary principle with the principle of preventing environmental damage and also arranges for public participation".

[160] For a survey of various North American and European legal and administrative systems of EIA policies, plans and programmes, see *Application of Environmental Impact Assessment Principles to Policies, Plans and Programmes* (United Nations publication, Sales No. E.92.II.E.28), pp. 43–48; today approximately 70 developing countries have EIA legislation of some kind. Other countries either are in the process of drafting new and additional EIA legislation or are planning to do so. See Yeater and Kurukulasuriya, "Environmental impact assessment legislation in developing countries", p. 259, and p. 260, for the format of EIA adopted in most legislations.

[161] Yeater and Kurukulasuriya, loc. cit., p. 259.

[162] See Herbert, "Developing environmental legislation for sustainable development in small island States: some legal considerations from the Commonwealth Caribbean", pp. 1229–1230.

[163] Ibid.

[164] See Yeater and Kurukulasuriya, loc. cit., pp. 263–264.

obligations (or reimbursement of government restoration costs) or imprisonment.[165]

126. Once a significant risk of transboundary harm is assessed, as a result of an EIA or otherwise, this would trigger an obligation for the State of origin to notify States likely to be affected providing them with all available information including the results of any assessment made.[166] Giving notification in a timely fashion to the affected State or States would expedite the process of decision-making with respect to the project involved. In any case, States likely to be affected would have the right: (*a*) to know what the investigations were and the results of those investigations; (*b*) to propose additional or different investigations; and (*c*) to verify for themselves the results of such investigations. Moreover, this assessment must precede any decision to proceed with the activities in question. It obligates parties to conduct a prior investigation of risks and not an evaluation of the effects of an activity after an event.[167]

127. In the case of a shared resource or where the impact assessment would require investigations not only in the territory of the State of origin but also in the territory of the States likely to be affected, there is an advantage in involving the States affected even at the early stage of the process of developing an EIA. Such involvement could assist either a joint or a separate but simultaneous effort to bring in the necessary inputs for finalizing the EIA.[168]

128. The cases in respect of which an EIA is required cannot always be predetermined by objective criteria. An element of judgement will always be present. At the national level, specifics of the national EIA legislation, administrative practices and environmental conditions could provide an indication of the cases requiring EIA. Alternatively, using certain criteria, for example, location, areas and size of the activity, the nature of its impact, the degree of risk, public interest and environmental values, it would also be possible to develop a list of activities subject to an EIA. The list thus prepared or the criteria employed could be updated and revised on the basis of experience gained and further availability of better knowledge of materials used, their impact as well as technology. Certain substances are listed in some conventions as dangerous or hazardous and their use in any activity may itself be an indication that the activities might cause significant transboundary harm and hence require an EIA.[169]

129. There are also certain conventions that list the activities that are presumed to be harmful, which might signal that these activities might fall within the scope of the draft articles and hence require an EIA.[170]

130. In assessing the significance of the likely impact of an activity on the environment, it is necessary to keep in view both the extent and the magnitude of the impact. The possibility that an activity may lead to significant transboundary harm by contributing to the cumulative effect of existing, individually significant impacts should also be considered.[171]

131. The content of the risk assessment could vary from activity to activity and other factors involved. The 1987 UNEP Goals and Principles of Environmental Impact Assessment provided that: "Where the extent, nature or location of a proposed activity is such that it is likely to significantly affect the environment, a comprehensive environmental impact assessment should be undertaken" (principle 1). Under principle 4 a proper EIA should include, at a minimum:

(*a*) A description of the proposed activity;

(*b*) A description of the potentially affected environment, including specific information necessary for identifying and assessing the environmental effects of the proposed activity;

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[165] Ibid., p. 267.

[166] See part XII, sect. 4, of the 1982 United Nations Convention on the Law of the Sea, which deals with monitoring and environmental assessment of any risks or effects of pollution of the marine environment and the sharing of the results thereof with other States which are likely to be affected by such pollution because of planned activities under the jurisdiction and control of the State. Similarly, the Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States (see paragraph 33 above), the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources, the 1989 World Bank Operational Policy 4.01, the 1991 Convention on Environmental Impact Assessment in a Transboundary Context, the 1991 Protocol to the Antarctic Treaty on Environmental Protection, the 1992 Convention on biological diversity and principle 17 of the Rio Declaration (see footnote 37 above) could also be cited as examples where the duty to conduct an EIA was envisaged. For a mention of these agreements, see New Zealand Ministry of Foreign Affairs and Trade, *New Zealand at the International Court of Justice—French Nuclear Testing in the Pacific: Nuclear Tests Case, New Zealand* v. *France (1995)* (Wellington, 1996), p. 184. See also articles 12 and 18 of the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses.

[167] See *New Zealand at the International Court of Justice* … (footnote 166 above), pp. 182–183. Furthermore, one commentator observed:

> "One may, however, consider the function of notification and consultation in this regard. The aim of such cooperation is to enable possibly affected other States to bring into play and safeguard their interests. This process of cooperation will necessarily include an exchange of views as to the substantiality of the possible harm to be likely to occur. Consequentially, the question, if a certain matter is relevant relates to the perspective of the States possibly affected. As it is incumbent on that State to figure out and decide whether its interests are at stake, the answer to the question of relevance seems to be that all matters have to be notified which within a reasonable perspective may be deemed to be relevant."

(Stoll, "The international environmental law of cooperation", p. 47)

[168] See *Current Policies* ... (footnote 157 above), p. 69.

[169] See, for example, the 1974 Convention for the Prevention of Marine Pollution from Land-based Sources (art. 4) and the 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area.

[170] See appendix I to the 1991 Convention on Environmental Impact Assessment in a Transboundary Context, where a number of activities such as crude oil refineries, thermal power stations, installations to produce enriched nuclear fuels, etc., are identified as possible dangers to the environment and requiring EIA under the Convention; annex II to the 1993 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 wastes by incineration on land or at sea, installations or sites for thermal degradation of solid, gaseous or liquid wastes under reduced oxygen supplies have been identified as dangerous activities. The same Convention also has a list of dangerous substances in annex I. See *Yearbook … 1996*, vol. II (Part Two), annex I, pp. 119–120, para. (8) of the commentary to article 10, footnotes 96–97.

[171] *Current Policies* ... (footnote 157 above), p. 49.

(*c*) A description of practical alternatives, as appropriate;

(*d*) An assessment of the likely or potential environmental impacts of the proposed activity and alternatives, including the direct, indirect, cumulative, short-term and long-term effects;

(*e*) An identification and description of measures available to mitigate adverse environmental impacts of the proposed activity and alternatives, and an assessment of those measures;

(*f*) An indication of gaps in knowledge and uncertainties which may be encountered in compiling the required information;

(*g*) An indication of whether the environment of any other State or areas beyond national jurisdiction is likely to be affected by the proposed activity or alternatives;

(*h*) A brief, non-technical summary of the information provided under the above headings.[172]

132. Similarly, article 4 of the 1991 Convention on Environmental Impact Assessment in a Transboundary Context also provided, by way of guidance to States parties, in appendix II a list of nine items, similar to the one noted above, on which information should be required for the purpose of EIA.[173]

133. Implementation of the requirement of risk assessment through a statement on EIA and the duty to notify the risk involved to the States concerned raises several issues concerning: time limits for notification and submission of information; content of the notification; responsibility for the procedural steps that aim at public participation, in particular, participation of the public of the affected State in the EIA procedures of the State of origin and responsibility for the cost involved. In the context of an examination of these matters in respect of the implementation of the 1991 Convention on Environmental Impact Assessment in a Transboundary Context, it has thus been observed:

> Current practice does not reflect the full implementation of the provisions of the Convention. There is at present a diverse experience in EIA in a transboundary context, and it can be concluded that until now no uniform approach to transboundary information exchange has been followed. The approaches proposed could serve as guidance to competent national authorities in the practical application of relevant provisions of the Convention. Experience gained in following these approaches could be examined in due course.[174]

134. It is also pertinent to note that, while reviewing the Antarctic Treaty System and the general rules of environmental law, one commentator observed that "adoption of environmental impact assessment at present cannot be considered to be more than a progressive trend of international law; we can hardly say that States consider such a practice legally binding under general international law".[175]

C. The principles of cooperation, exchange of information, notification, consultation and negotiation in good faith

135. The general principle of cooperation among States is an important principle in respect of prevention. Other relevant principles in this regard are the principles of good faith and good-neighbourliness. The principle of cooperation was emphasized in article 3 of the Charter of Economic Rights and Duties of States, adopted by General Assembly resolution 3281 (XXIX) of 12 December 1974, in General Assembly resolution 2995 (XXVII) of 15 December 1972 on cooperation between States in the field of the environment and in General Assembly resolution 3129 (XXVIII) of 13 December 1973 on cooperation in the field of the environment concerning natural resources shared by two or more States. In addition, principle 24 of the 1972 Stockholm Declaration,[176] states:

> International matters concerning the protection and improvement of the environment should be handled in a co-operative spirit by all countries, big and small, on an equal footing. Co-operation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the sovereignty and interests of all States.

136. Similarly, the principle of cooperation was emphasized in article 197 of the United Nations Convention on the Law of the Sea, under which States are required to cooperate "in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features".

137. Article 8, paragraph 1, of the Convention on the Law of the Non-navigational Uses of International Watercourses provides that watercourse States have the general obligation to "cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilization and adequate protection of an international watercourse".

138. The greater reliance on the principle of cooperation is significant in that it marks a departure from the classical approach based on principles of coexistence amongst States and emphasizes a more positive or even more integrated interaction among them to achieve common ends,

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[172] For the full text, see Birnie and Boyle, op. cit.

[173] However, the list in the Convention contains no reference to the requirement of an indication as to whether the environment of any other State or area beyond national jurisdiction is likely to be affected by the proposed activity or alternatives, as noted in principle 4 (*g*) of the UNEP Goals and Principles of Environmental Impact Assessment. However, the Convention, in appendix II (*h*), suggests that, where appropriate, an outline for monitoring and management programmes and any plans for post-project analysis should be included in EIA, a requirement not indicated in the UNEP Goals.

[174] *Current Policies* … (footnote 157 above), p. 46.

[175] Pineschi, "The Antarctic Treaty System and general rules of international environmental law", pp. 206–207. As regards the EIA legislation of developing countries, it was observed that its effectiveness remained unclear. Common problems which developing countries continue to face include: strong political and other support for unrestricted socio-economic development; burdensome institutional or administrative arrangements which cause delays and make EIA seem anti-development; a lack of national EIA expertise and financial resources to implement legislation; weak public participation; and the inability of EIA to affect actual decision-making; see Yeater and Kurukulasuriya, loc. cit., p. 267.

[176] See footnote 18 above.

while charging them with positive obligations of commission.[177]

139. Cooperation could involve both standard-setting and institution-building as well as action undertaken in a spirit of reasonable consideration of each other's interests and towards achievement of common goals. Accordingly, there are several treaties which incorporate principles of equitable sharing and adopt an integrated approach to the development of shared resources, particularly in the context of a river basin. Reference in this regard could be made to the 1959 Agreement (with annexes) for the full utilization of the Nile waters between the United Arab Republic and Sudan;[178] the 1960 Indus Waters Treaty between India and Pakistan;[179] the 1961 Treaty between Canada and the United States of America relating to cooperative development of the water resources of the Columbia River basin[180] and the 1987 Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System.[181] In the case of petroleum resources where more than one State holds exploitation rights to overlapping, straddling or proximate reservoirs, it is common for States to enter into joint cooperation arrangements for the development of the resource. Contractual arrangements entered into in this regard, which are also referred to as "unitization agreements", determine the rights and obligations of the parties. Such inter-State unitization agreements were concluded between Saudi Arabia and the Sudan in 1974, between Norway and the United Kingdom of Great Britain and Northern Ireland in 1976, and between Australia and Indonesia in 1989.[182]

140. At the procedural level, cooperation embraces a duty to notify the potentially affected neighbouring State(s) and to engage in consultation with such State(s). The duty to notify would be specific in the case of a planned activity which has a risk of causing significant transboundary harm to other States or areas beyond national jurisdiction. Such a duty of cooperation could also involve regular exchange of data and information, as provided in article 9 of the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses.

141. In either case, the duty of the State is to provide such information as is readily available to it. However, States are expected to employ their best efforts to collect and, where appropriate, to process data and information in a manner which facilitates its utilization by the other States to which it is communicated.

142. The duty of cooperation and the further duty to notify also implies that if any additional information is required by the other State, the same shall also be supplied.[183]

143. Where further information is provided to other concerned States at their request, such service can be rendered on payment of reasonable cost. Further, in considering the timing of notification and the extent of information to be given, it is difficult to define in an abstract manner any kind of standard because of uncertainty about what constitutes relevant harm and also because standards in this regard may vary. Moreover, it is obvious that the duty to notify and provide relevant information to other States concerned is related to national policies, procedures and law.[184]

144. In addition, the general duty to cooperate is also now understood to extend beyond the duty of the State in whose territory the risk-bearing activity is undertaken to third States and even to those States which actually are likely to be affected. As has been noted, "[t]his may indicate, that there is some idea of a common interest in reducing and mitigating the harm done. Apparently, this common interest is considered to supersede the very logic of liability in cases, where liability cannot be established or where the State responsible for the harm is not capable of reducing and mitigating the harm done".[185]

145. The general duty to cooperate could also be expressed through the establishment of joint planning commissions and/or other joint commissions.[186]

146. At the normative level, it is difficult to conclude that there is an obligation in customary international law to cooperate generally. States are prepared to recognize an international common interest and a general duty to cooperate only in carefully delimited areas. Accordingly, it has been observed that "[t]he great number of similar provisions in existing treaty regimes on each of those aspects of cooperation cannot be understood to constitute related customary international law rules which may be considered to generally apply in environmental matters".[187]

147. The duty to notify leads to a duty to consult with concerned States on the basis of the information supplied or needed. The objective of consultation is to reconcile conflicting interests and to arrive at solutions which are mutually beneficial or satisfactory. Article 17 of the general principles adopted by the Experts Group on Environmental Law of the World Commission on Environment

[177] Progressive development of the principles and norms of international law relating to the new international economic order: report of the Secretary-General (A/39/504/Add.1), annex II, summary of the analytical study, pp. 18–19. See also Francioni, "International co-operation for the protection of the environment: the procedural dimension", p. 203.

[178] United Nations, *Treaty Series*, vol. 453, p. 51.

[179] Ibid., vol. 419, p. 125.

[180] Ibid., vol. 542, p. 246.

[181] See Deng, "Peaceful management of transboundary natural resources", pp. 186–188.

[182] Ibid., pp. 194–197.

[183] However, it is pertinent to note here the observation of the arbitral tribunal in the *Lake Lanoux* case, which stated that "[a] State wishing to [engage in planned activities] which will affect an international watercourse cannot [unilaterally] decide whether another State's interests will be affected; the other State is the sole judge of that and has the right to information on the proposals" (footnote 85 above), p. 119. See also the argument of New Zealand before ICJ (footnote 166 above).

[184] See Stoll, loc. cit., p. 48.

[185] Ibid., p. 54; see also page 55, footnote 43. In addition see article 7 of the resolution on environment adopted by the Institute of International Law (footnote 54 above).

[186] See the resolution on the pollution of rivers and lakes and international law adopted by the Institute of International Law at its Athens session in September 1979, which contains articles on exchange of information, prior notification and the establishment of international agencies to combat pollution: *Yearbook of the Institute of International Law*, vol. 58, part II, p. 197. See also Deng, loc. cit., p. 192.

[187] Stoll, loc. cit., p. 64.

and Development[188] states that such consultations should be held in good faith, upon request, at an early stage, between the notifying State(s) and the notified State(s). The arbitral tribunal in the 1957 award in the *Lake Lanoux* case observed that, where different interests of riparian States are involved, "according to the rules of good faith, the upstream State is under the obligation to take into consideration the various interests involved, to seek to give them every satisfaction compatible with the pursuit of its own interests, and to show that in this regard it is genuinely concerned to reconcile the interests of the other riparian State with its own".[189]

148. Mention may also be made in this regard of the case concerning the *Territorial Jurisdiction of the International Commission of the River Oder* considered by PCIJ, where the Court, rejecting the contention of Poland that the jurisdiction of the Commission ended where the Oder crossed into Poland, held that "it is at once seen that a solution of the problem has been sought not in the idea of a right of passage in favour of upstream States, but in that of a community of interest of riparian States". It further added that

> This community of interest in a navigable river becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the user of the whole course of the river and the exclusion of any preferential privilege of any one riparian State in relation to others.[190]

149. Considerations noted above in respect of the duty to consult would also apply in respect of the duty to negotiate which could arise thereafter. For example, article 17 of the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses points out that the consultations and negotiations "shall be conducted on the basis that each State must in good faith pay reasonable regard to the rights and legitimate interests of the other State". Moreover, in the case of planned activities, article 17, paragraph 3, further states that:

> During the course of consultations and negotiations, the notifying State shall, if so requested by a notified State at the time it makes the communication, refrain from implementing or permitting the implementation of the planned measures for a period of six months unless otherwise agreed.

150. It is well established that the obligation to negotiate, where it arises, does not include an obligation to reach an agreement.[191] However, as was pointed out by ICJ in the *North Sea Continental Shelf* cases, negotiation, to be in conformity with the obligation to negotiate, should be meaningful, be a genuine endeavour at bargaining, and not a mere affirmation of one's claims without ever contemplating to meet the adversary's claim.[192]

151. Thus, the obligation to consult and negotiate in good faith, as appropriate, does not amount to prior consent from or a right of veto of the States with which consultations are to be held. This has been further confirmed by the Commission in connection with the draft articles on the law of the non-navigational uses of international watercourses. While providing for the requirement of consultation with a view to negotiating in good faith for the purpose of concluding a watercourse agreement or agreements, the Commission stated that:

> Moreover, watercourse States are not under an obligation to conclude an agreement before using the waters of the international watercourse. To require conclusion of an agreement as a pre-condition of use would be to afford watercourse States the power to veto a use by other watercourse States of the waters of the international watercourse by simply refusing to reach agreement. Such a result is not supported by the terms or the intent of article 3. Nor does it find support in State practice or international judicial decisions (indeed, the *Lake Lanoux* arbitral award negates it).[193]

D. The principle of dispute prevention or avoidance and settlement of disputes

152. Though strictly not falling under the rubric of prevention of harm, the principle of dispute avoidance or prevention of disputes is also suggested as one of the components of prevention. It emphasizes the need to anticipate and prevent environmental problems. As part of the concept of dispute avoidance, States are urged to develop methods, procedures and mechanisms that promote, *inter alia*, informed decisions, mutual understanding and confidence-building.[194] Further, such procedures and methods would entail—apart from exchange of available information, prior informed consent, transboundary environmental impact assessment—the use of fact-finding commissions involving independent scientific and technical experts and panels as well as national reporting.

153. The emphasis on dispute avoidance has a compelling ring to it inasmuch as it is evident that, unlike normal illegal acts, environmental damage is required to be prevented as far as possible *ab initio*. Once such damage occurs, it is generally feared that its negative consequences cannot be fully wiped out through reparation and the situation prior to the event or incident generally cannot be restored. It has thus been suggested that:

> The rationale behind emphasis upon prevention or avoidance of environmental disputes is thus rooted in the clear preference of the policy of *forecasting* and *preventing* environmental damage to that of *reacting* and *correcting* such damage, when corrective measures would turn out to be simply otiose.[195]

154. The matter of dispute avoidance was also considered during the United Nations Conference on Environment and Development preparatory process and at the Rio

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[188] *Environmental Protection and Sustainable Development* … (see footnote 45 above), pp. 104–105.

[189] *International Law Reports, 1957*, p. 139 (see footnote 85 above).

[190] *Territorial Jurisdiction of the International Commission of the River Oder, Judgment No. 16, 1929, P.C.I.J., Series A, No. 23*, p. 27.

[191] Murthy, "Diplomacy and resolution of international disputes", p. 163.

[192] See *North Sea Continental Shelf, Judgment, I.C.J. Reports 1969*, p. 47.

[193] *Yearbook ... 1994*, vol. II (Part Two), p. 94, para. (17) of the commentary to draft article 3. According to one author, consultation means something more than notification but less than consent. See Kirgis Jr., *Prior Consultation in International Law*, p. 11: "*Consultation* means something more than notification, but less than consent." See also the Montreal Rules of International Law Applicable to Transfrontier Pollution, ILA, *Report of the Sixtieth Conference* (footnote 128 above).

[194] UNEP/IEL/WS/3/2 (see footnote 44 above), p. 6.

[195] The concept of dispute avoidance was also discussed at a meeting of experts convened by the Rockefeller Foundation at Bellagio, Italy, in 1974. It was later also echoed in the negotiations of the United Nations Conference of the Law of the Sea; see Adede, "Avoidance, prevention and settlement of international environmental disputes", p. 54.

Conference itself. A proposal put forward by Austria and five other States involved the establishment of a compulsory inquiry commission in which the Executive Director of UNEP was given an important role. The inquiry commission would have been given the mandate to clarify and establish the factual issues of a situation originating in one State and of concern to other States. The commission would have been competent to seek access to all relevant documents and to the site of the activity giving rise to the situation. The proposal, however, did not gather support at Rio as States were reluctant to subordinate national sovereignty and jurisdiction to the competence of such commissions. Accordingly, in chapter 39, paragraph 10, of Agenda 21 the Conference recommended that in the area of avoidance and settlement of disputes, States should further study and consider methods to broaden and make more effective use of the range of techniques currently available.[196]

155. Article 33 of the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses makes an attempt to project a role for compulsory fact-finding missions, while all other procedures of dispute settlement mentioned therein have been kept optional requiring the consent of all States parties involved.[197]

156. Fact-finding has also been the focus of United Nations efforts to enhance its capability under the Charter of the United Nations to maintain international peace and security. Accordingly, the General Assembly, in its resolution 46/59 of 9 December 1991, adopted a Declaration on Fact-finding by the United Nations in the Field of the Maintenance of International Peace and Security the main purpose of which was to enhance the fact-finding capabilities of the Secretary-General, the Security Council and the General Assembly to enable them to exercise their functions effectively under the Charter. It provided, *inter alia*, that the Secretary-General, on his own initiative or at the request of the States concerned, should consider undertaking fact-finding missions in areas where a situation exists which might threaten the maintenance of international peace and security. When appropriate, he may bring the information obtained to the attention of the Security Council.[198]

157. Dispute avoidance also comprises techniques like seeking good offices, mediation and conciliation, in addition to fact-finding commissions. Boutros Boutros-Ghali, then Secretary-General of the United Nations, in his important contribution contained in his report entitled *An Agenda for Peace*, articulated these elements as part of a strategy of promoting preventive diplomacy and peacemaking. Preventive diplomacy is a measure to ease tensions before they result in conflict, or if conflict breaks out, to act swiftly to contain it and resolve its underlying causes. Such diplomacy "requires measures to create confidence; it needs early warning based on information gathering and informal or formal fact-finding; it may also involve preventive deployment and, in some situations, demilitarized zones".[199] The United Nations is also developing several early warning systems concerning environmental threats, the risk of nuclear accidents, natural disasters, mass movements of population, the threat of famine and the spread of disease. Attempts are further being made to synthesize information gathered with political indicators to assess whether a threat to peace exists and to analyse action that could be taken by the United Nations to avoid disputes or defuse a crisis.

158. Explaining the various options available in promoting peacemaking, the Secretary-General noted that:

> Mediation and negotiation can be undertaken by an individual designated by the Security Council, by the General Assembly or by the Secretary-General ... Frequently it is the Secretary-General himself who undertakes the task. While the mediator's effectiveness is enhanced by strong and evident support from the Council, the General Assembly and the relevant Member States acting in their national capacity, the good offices of the Secretary-General may at times be employed most effectively when conducted independently of the deliberative bodies.[200]

159. It may be noted that good offices or mediation could be offered as a means of preventing further deterioration of the dispute and as a method of facilitating efforts for the peaceful settlement of the dispute. In the case of good offices extended upon the initiative of a third party or at the request of one or more parties to the dispute, it is subject to the acceptance by all the parties to the dispute. The third party exercising good offices normally seeks to encourage the parties to the dispute to resume negotiations and thus provides them with a channel of communication. Of course, it could also take a more active role and make proposals for solutions at the request of the parties. In the latter case, the process amounts to almost mediation.

160. Mediation is thus essentially a method of peaceful settlement or avoidance of disputes where a third party intervenes to reconcile the claims of the contending parties and to advance its own proposals aimed at a mutually acceptable compromise solution. It is a distinctive method for facilitating a dialogue between the parties to an international dispute or situation aimed at scaling down hostilities and tensions and for achieving, through a political process controlled by the parties, an amicable solution to the problem involved. Mediation is best employed when both parties are willing to resolve their differences. However, no mediation can take place unless it is initiated by a third party and a mediator has been accepted or appointed by agreement among the parties.

161. As opposed to the methods described above, conciliation is a procedure which combines the elements of both inquiry and mediation. It provides the parties on the one hand with an objective investigation and evaluation of all aspects of the dispute and, on the other hand, with an informal third-party machinery for the negotiation and non-judicial appraisal of each other's legal and other claims, including the opportunity to define the terms for a solution susceptible of being accepted by them.[201]

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[196] Agenda 21 (see footnote 37 above), annex II.

[197] See McCaffrey and Rosenstock, "The International Law Commission's draft articles on international watercourses: an overview and commentary", p. 93.

[198] For an analysis of the Declaration, see Bourloyannis, "Fact-finding by the Secretary-General of the United Nations". See also Al-Baharna, "The fact-finding mission of the United Nations Secretary-General and the settlement of the Bahrain-Iran dispute, May 1970".

[199] Boutros-Ghali, *An Agenda for Peace*, pp. 46–47, para. 23.

[200] Ibid., p. 53, para. 37.

[201] For an analysis of the method of good offices, mediation and conciliation and State practice relating to them, see *Handbook on the Peaceful Settlement of Disputes between States* (United Nations publication, Sales No. E.92.V.7, document OLA/COD/2394), chap. II, sects. C–E.

162. Both mediation and conciliation would involve basically negotiations between the parties with the participation of a third party. While the parties have a role to play in both instances and have some control over the process, they have no direct influence over the solution to be proposed by a mediator or a conciliator.

163. Methods of dispute avoidance would have an innovative and influential role to play in bringing parties together by identifying their claims and clarifying their interests and resolving them in a flexible way through a process of negotiation and mutual concessions. As has been pointed out, through these methods the intermediaries could provide useful services to help the parties not only in initiating the process of dispute resolution but also in resolving possible procedural, technical and substantive difficulties encountered during the process. They could also address the needs, wants, concerns and fears of the parties concerned and persuade and convince the parties by what means they should resolve the dispute.[202]

164. All the techniques referred to in Article 33 of the Charter of the United Nations would no doubt best contribute to the prevention of disputes or their early resolution when employed with the consent of all the parties involved. Further, dispute avoidance is enhanced through improved compliance with international obligations and other implementation mechanisms. Degree of compliance with and implementation of international obligations would no doubt depend upon the existence and effectiveness of national policy, corresponding legislation and monitoring institutions.[203]

165. Several international environmental treaties also rely on self-reporting on a broad range of activities including, for example, efforts to curb trade in endangered species of wildlife, reduce greenhouse gas emissions, eliminate production of ozone-destroying substances and conserve biological diversity. National reporting is also an important element in enhancing implementation.

166. An expert group which studied the matter has made several recommendations with respect to enhancing compliance with and implementation of international obligations:

(*a*) Compliance frequently requires resources, including technologies or technical expertise, that are not readily available, particularly in developing countries. Failure to comply often reflects a lack of capacity rather than a lack of will. Accordingly, reliance on sanctions will typically not be appropriate except in response to flagrant violations of international norms caused by a lack of will rather than by a lack of capacity;

(*b*) Owing to the global nature of some environmental issues and the potentially high cost of compliance, particularly for developing countries and countries in transition, compliance and implementation must be approached in a spirit of global partnership. Such a partnership could include the provision of additional financial resources, technical assistance, transfer of technology and capacity-building. (One recent example that seeks to identify appropriate enabling mechanisms is the non-compliance procedure under the Montreal Protocol on Substances that Deplete the Ozone Layer, which allows countries to report difficulties with compliance to an implementation committee, thereby enlisting the help of other parties to the instrument in achieving compliance);

(*c*) Capacity-building of developing countries to implement their international obligations remains among the most crucial challenges for enabling compliance. Apart from various efforts to promote such capacity-building through specific provisions of international environmental treaties, in future, increased cooperation and new partnerships with and among different actors, including, for example, the financial institutions, industry, and environment and development, non-governmental organizations, will be critical for improving compliance and implementation;

(*d*) Compliance with reporting requirements could be enhanced by, *inter alia*, increasing capacity to gather information and compile the necessary reports; streamlining, harmonizing and integrating existing reporting requirements; increasing transparency and public involvement in reporting; and adopting new technologies and methodologies for reporting. International cooperation and assistance should also be targeted to assist developing countries and countries in transition in implementing coherent, effective and credible reporting systems;

(*e*) Subject to their constitutive instruments, international organizations can also play an enhanced role in this regard. Treaty secretariats should assist parties in enacting enabling domestic legislation to implement the treaty obligations. National compliance plans containing specific and measurable benchmarks should be developed and submitted to the treaty secretariats;

(*f*) Regional approaches to enhancing implementation and compliance may play an important role in the future. Processes of regional economic integration, to the extent that they aim at sustainable development, may contribute to monitoring or enhancing environmental performance. (As one example, note the independent review by OECD of the environmental performance of each member country, which includes implementation of international treaties);

(*g*) Many non-State actors have the expertise and resources to monitor and assist implementation efforts and draw attention to incidents of non-compliance. The non-State actors working in cooperation with Governments can contribute significantly to a culture of compliance by helping to build the capacity for implementation, by assisting in the transfer and dissemination of technology and knowledge, and by raising the general awareness of environmental issues;

(*h*) Increased education concerning environmental issues particularly at the local level is also important for facilitating improved compliance and implementation.

[202] See Lee, "How can States be enticed to settle disputes peacefully?", p. 292.

[203] Lang, "Compliance control in international environmental law: institutional necessities".

E. The principle of non-discrimination

167. The principle of non-discrimination or the equal right of access recognized by OECD is designed to make available to actual or potential "victims" of transfrontier pollution, who are in a country other than that where the pollution originates, the same administrative or legal procedures as those enjoyed by potential or actual victims of a similar pollution in the country of origin. Even though the principle thus stated is more relevant in the context of seeking remedies in the face of substantial harm that already occurred in its application, it provides in fact for a situation where two victims of the same transfrontier pollution situated on opposite sides of a common frontier have the same opportunity to voice their opinions or defend their interests both at the preventive stage before the pollution has occurred and in the curative stage thereafter. Accordingly, the national and foreign "victims" may participate on an equal footing at inquiries or public hearings organized, for example, to examine the environmental impact of a polluting activity and may undertake proceedings in relation to environmental decisions which they wish to challenge without discrimination before the appropriate administrative or legal authorities of the country where the pollution originates. They may also take legal action to obtain compensation for a damage or its cessation.[204]

168. The principle of non-discrimination is designed primarily to deal with environmental problems occurring among neighbouring States, as opposed to long-distance pollution. The principle aims at providing equal treatment for aliens on par with nationals in respect of legal rights and remedies and right of access to judicial and administrative forums they enjoy in their State. Successful operation of the principle would require some similarities between the legal systems in the neighbouring States and some similarities between their policies for the protection of the rights of persons, property and environment situated within their territories. A potential problem with the application of the principle lies in the fact that there are sometimes drastic differences between the substantive remedies provided in various States. Mention may be made in this context of the differences between the environmental laws of the United States and Mexico or between some Western European and Eastern European States. Difficulties have been experienced even within the OECD countries. One such difficulty relates to the long-standing tradition in some countries whereby administrative courts have no jurisdiction to hear cases concerning the extraterritorial effects of administrative decisions. A second difficulty, in a few countries, arises from conferring sole jurisdiction on the courts of the place where the damage occurred.[205]

169. Article 32 of the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses also deals with the principle of non-discrimination. It provides that natural or juridical persons who have suffered or are under a serious threat of suffering significant transboundary harm shall without discrimination have access in accordance with the national legal system of the State of origin to judicial or other procedures of that State or a right to claim compensation or other relief in respect of significant harm caused by activities carried on its territory. The Convention was adopted by a recorded vote, with 103 States in favour, 3 against and 27 States abstaining. Some States had reservations on the suitability and applicability of the principle of non-discrimination at a global level, particularly in respect of a community of States which are not economically, socially and politically integrated.[206]

170. The principle of non-discrimination has come before the Commission for consideration in various forms. Article 29 of the draft article presented by Mr. Barboza in his sixth report dealt with this concept. According to that provision, in the event of transboundary harm, a State would have the obligation through national legislation to grant its courts jurisdiction to deal with claims of liability from affected States or individuals or legal entities. Thus, the principle was presented as a component of a regime on civil liability.[207] The question of providing suitable remedies in case of transboundary harm to persons, property and the environment in the affected State within the law and procedure and through the legal and other forums of the affected State was also discussed in Mr. Barboza's tenth report, where different alternative channels for such remedies were noted.[208] The matter was left undecided, as the Commission took the decision at the time to limit the scope of the exercise initially to the question of prevention only. Accordingly, no article was adopted on this matter by the Commission. However, the Working Group adopted in 1996 article 20 on the principle of non-discrimination under chapter III on compensation or other relief.[209]

171. The rule of non-discrimination is meant to provide equality of access to all potential or actual victims of an activity bearing a risk of causing substantial harm without discrimination on grounds of nationality, residence or place of injury. However, the situation of potential victims is different from that of actual victims in terms of remedies available to them. Potential foreign victims are first protected by their own State, that is, the affected State to which the State of origin owes a duty of notification, consultation and negotiation in case of such activities. There is also the evolving requirement of EIA for seeking authorization under national law for dangerous activities, which in turn provides for public participation. Such participation could be extended to foreign potential victims on a par with nationals before various concerned forums or where joint assessment is undertaken by States of origin and the affected State, through forums established in

[204] See OECD Council recommendation C(76)55(Final) on equal access in matters of transfrontier pollution of 11 May 1976, cited in *Yearbook … 1995*, vol. II (Part One), document A/CN.4/471, pp. 82–84, paras. 118–129.

[205] Ibid., p. 83, para. 125.

[206] Colombia, Ethiopia, India and the Russian Federation had reservations on the article. The United Republic of Tanzania had reservations on the phrase "or the place where the injury occurred", as it might come in conflict with the territorial limitations of cause of action. See *Official Records of the General Assembly, Fifty-first Session, Sixth Committee*, 99th plenary meeting (A/51/PV.99), and corrigenda.

[207] See sixth report (footnote 5 above), pp. 99–100 and 109.

[208] See tenth report (footnote 5 above), pp. 146–148, paras. 91–109, where four alternatives were set out: (*a*) State to State; (*b*) private parties versus State of origin; (*c*) affected State versus private parties; and (*d*) private injured parties versus private liable parties.

[209] *Yearbook … 1996*, vol. II (Part Two), annex I, p. 129.

one's own State or before forums of the State of origin as per any agreed regime of prevention between the State of origin and the affected State.

172. Questions could still arise concerning public participation. Opinions could vary, referendums may not be representative of the true will of people and it may not be possible to express an opinion based on scientific evidence to enable the State to make reasonable and prudent decisions. Similarly, questions would also arise regarding the *locus standi* of foreign potential victims to participate in the preliminary assessment stage where no conclusion could be drawn about the nature and magnitude of the risk involved. However, once it is established that the risk is significant, there is a compelling need to give foreign potential victims suitable access to appropriate forums so as to enable the State of origin to take into consideration their views and interests. In this respect, there appears to be more than one possible option.

173. The case of foreign actual victims of transboundary harm is a different one. However, the matter must be discussed in a different context, as the present focus is only on prevention. The draft article adopted by the Working Group of the Commission in 1996 and the various alternatives indicated by Mr. Barboza in his tenth report could be reviewed, as appropriate, at a later stage.[210]

[210] For some of the alternatives discussed, see also Guruswamy, Palmer and Weston, op. cit., pp. 325–332.

CHAPTER VI

Principles of content

A. The principle of precaution

174. The principle of precaution states that where there are threats of serious or irreversible harm, a lack of full scientific certainty about the causes and effects of environmental harm shall not be used as a reason for postponing measures to prevent environmental degradation. Implementation of this principle would involve anticipation of environmental harm and taking measures to avoid it or to choose the least environmentally harmful activity. It is based upon the assumption that scientific certainty, to the extent it is obtainable, with regard to issues of environment and development may be achieved too late to provide effective responses to environmental threats. The principle also suggests that where there is an identifiable risk of serious or irreversible environmental harm, including, for example, extinction of species, widespread toxic pollution or major threats to essential ecological processes, it may be appropriate to place the burden of proof on the person or entity proposing the activity that is potentially harmful to the environment.[211]

175. One study which analysed at some depth the principle of precaution and resource conservation identified the following precautionary measures:

(*a*) Environmental protection should not only aim at protecting human health, property and economic interests, but also protect the environment for its own sake;

(*b*) Precautionary duties must not only be triggered by the suspicion of concrete danger but also by (justified) concern or risk potential;

(*c*) Prevention and abatement duties must not be conditioned on full scientific proof or a precise cause/effect relation and attainment of damage thresholds;

(*d*) A permit requirement for potentially dangerous activities, environmental monitoring, pollution control and minimal planning are crucial for planned resources and eco-management;

(*e*) This requires long-term planning. A human rights approach (right to decent environment) is desirable;

(*f*) There must be regional eco-management and, for a few areas, global cooperation instead of purely national management. Regular information, timely notification and consultation are essential conditions for this purpose. Joint monitoring, joint emergency regimes and joint scientific cooperation are also helpful;

(*g*) There must be no differentiation between domestic and international environmental damage. This internationalization and regional and global solidarity must also lead to technology transfer to developing countries to enable them to implement eco-management;

(*h*) Precautionary eco-management can be best achieved through extensive technical and regional planning, EIA, limitation of discharges through emission standards and treatment using the best available technology. The choice of technology should not be dependent upon economic criteria; quality standards should not replace emission standards;

(*i*) Precautionary eco-management also requires modern measures affecting the generation (and disposal) of wastes through product substitution, reduction or recycling of wastes. Financial incentives should support these minimization measures in the production processes. Insurance or funding solutions would also be necessary. The principle of solidarity should also allow funding for developing countries in the common interest, especially for enabling them to implement the necessary product substitution.[212]

[211] UNEP/IEL/WS/3/2 (footnote 44 above), p. 14.

[212] See Hohmann, *Precautionary Legal Duties and Principles of Modern International Environmental Law—The Precautionary Principle: International Environmental Law Between Exploitation and Protection.*

176. The precautionary principle has been incorporated in a number of international legal instruments, among them the 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area and the 1992 Maastricht Treaty which states that the European Community policy on the environment shall be based on the precautionary principles. It is also incorporated in principle 15 of the Rio Declaration, which provides that "[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation". Principle 15 further requires that "the precautionary approach shall be widely applied by States according to their capabilities".[213]

177. The precautionary principle has been included in some conventions setting forth the obligation of States parties to prevent the release of certain substances into the environment which may cause harm to humans or to the environment. For example, the 1991 OAU Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, states in article 4, paragraph 3 (*f*), that:

> Each Party shall strive to adopt and implement the preventive, precautionary approach to pollution problems which entails, inter alia, preventing the release into the environment of substances which may cause harm to humans or the environment without waiting for scientific proof regarding such harm. The Parties shall co-operate with each other in taking the appropriate measures to implement the precautionary principle to pollution prevention through the application of clean production methods, rather than the pursuit of a permissible emissions approach based on assimilative capacity assumptions.

178. The parties to the 1985 Vienna Convention for the Protection of the Ozone Layer stated in the preamble that in agreeing to the various obligations contained in the Convention, they were "[m]indful also of the precautionary measures for the protection of the ozone layer which have already been taken at the national and international levels".

179. While reference to the precautionary principle or approach can be found in many other treaties or agreements, the precise formulation is not identical in each instrument. The traditional approach requires action only in case of scientific evidence establishing the likelihood of a serious hazard. This requires the party wishing to adopt a measure to prove a case for action based upon the existence of sufficient scientific evidence which may be difficult to obtain. The more modern approach would reverse the situation and would urge the States to take action to prevent, mitigate or eliminate grave and imminent harm taking into account the extent and probability of imminent damage if those measures are not taken.[214]

180. This might require States undertaking or permitting activities creating the risk of causing transboundary harm to establish that their activities or discharges of certain substances would not adversely or significantly affect the environment before the proposed activity is commenced. This interpretation may also require international regulatory action where scientific evidence suggests that the lack of action may result in serious or irreversible harm.

181. However, the 1990 Bergen Ministerial Declaration on Sustainable Development in the ECE Region was the first international instrument to treat this principle as one of general application and linked to sustainable development. It provided that:

> In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.[215]

182. The precautionary principle was recommended by the UNEP Governing Council in order to promote the prevention and elimination of marine pollution, which is increasingly becoming a threat to the marine environment and a cause of human suffering.[216] The 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa adopted this principle in order to achieve prevention of pollution through the application of clean production methods (art. 4 (3) (*f*)). The Convention also lowers the threshold at which scientific evidence might require action by not referring to "serious" or "irreversible" as adjectives qualifying harm. While the 1992 Convention on biological diversity refers to the principle indirectly only in its preamble, the 1992 United Nations Framework Convention on Climate Change established limits on the application of the precautionary principles by requiring a threat of "serious or irreversible damage" and by linking the commitment to an encouragement to take measures which are "cost-effective" (art. 3 (3)).

183. From the above it may be concluded that there is no uniform understanding of the meaning of the precautionary principle among States and other members of the international community. Identifying or fixing the level at which scientific evidence is sufficient to override arguments postponing measures or at which measures might even be required as a matter of international law is still an open question.[217]

184. Summing up the legal status of the precautionary principle, one commentator characterized it as "evolving". He further suggested that even though a good argument could be made that a principle which has received sufficient confirmation in various international treaties may be regarded as having acquired the status of a customary principle of international law, "the consequences of its application in any potential situation will be influenced by the circumstances of each case".[218]

185. The precautionary principle is essentially a good policy to be adopted by States. It is a policy of common sense and should be resorted to as a matter of self-interest. It is however understood that where the benefits of a certain activity, according to existing practices, far out-

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[213] See footnote 37 above.

[214] See Sands, op. cit., p. 209.

[215] "Action for a common future: report of the Economic Commission for Europe on the Bergen Conference" (8–16 May 1990) (A/CONF.151/PC/10), annex I, para. 7.

[216] See *Official Records of the General Assembly, Forty-fourth Session, Supplement No. 25* (A/44/25), annex I, decision 15/27 of 25 May 1989; see also Sands, op. cit., p. 210.

[217] Sands, op. cit., p. 212.

[218] Ibid., pp. 212–213.

weigh consequences which are only feared or otherwise suspected, it would be difficult to yield to the demands of the precautionary principle when few viable alternatives exist to meet the urgent developmental demands of the population at large, which is predominantly poor.[219]

B. The polluter-pays principle

186. The polluter-pays principle was first enunciated by the OECD Council in 1972.[220] It was set out as an economic principle and as the most efficient means of allocating the costs of pollution prevention and control measures so as to encourage the rational use of scarce environmental resources. It also encourages, as a matter of economic policy, free-market internalization of the costs of publicly mandated technical measures in preference to inefficiencies and competitive distortions in governmental subsidies and thus attempts to avoid distortions in international trade and investment.[221]

187. The principle was originally intended to be applied by a State with regard to activities within its territory and was later extended by OECD in 1989 beyond chronic pollution caused by ongoing activities to cover accidental pollution. Accordingly, it was noted that:

> [I]n matters of accidental pollution risks, the polluter-pays principle implies that the operator of a hazardous installation should bear the cost of reasonable measures to prevent and control accidental pollution from that installation which are introduced by public authorities in member countries in conformity with domestic law prior to the occurrence of an accident in order to protect human health or the environment.[222]

188. The members of the European Community have committed themselves to the polluter-pays principle. That commitment appears in the 1986 Single European Act which amended the Treaty of Rome and granted the European Community for the first time the express power to regulate environmental affairs. The Act refers specifically to the polluter-pays principle as a principle governing such regulations and states that "[a]ction by the Community relating to the environment shall be based on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source, and that the polluter should pay" (art. 130 R, para. 2). The European Community has also been applying the polluter-pays principle to the sources of pollution. For example, the Community has approved a directive which expressly instructed member States to impose the costs of waste control on the holder of waste and/or prior holders or the waste generator in conformity with the polluter-pays principle.[223]

189. The application of the polluter-pays principle (and its costs) would involve both preventive as well as remedial measures. According to one commentator, in the United States of America, for example, if a source of accidental pollution is responsible for the restoration of the environment that responsibility is considered a measure for compensation for damage inflicted, not a preventive or protective measure. Such is also the case with remedial costs of hazardous waste clean-up.[224] The United States does not recognize the polluter-pays principle, even though it applies its main features in practice.[225]

190. The polluter-pays principle was adopted at the global level in 1992 as principle 16 of the Rio Declaration according to which:

> National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.[226]

191. Since then the principle has also gained increasing acceptance and has been used as a guiding concept in designing national environmental laws and regulations. While developed countries have implemented various economic instruments for several years, developing countries and countries with economies in transition are beginning to incorporate economic instruments into their national legislation.[227]

192. Principle 16 of the Rio Declaration dealt with both costs of pollution and environmental costs, i.e. a set of costs broader than the costs of pollution prevention, control and reduction measures. The other costs to be considered in this regard are:

(*a*) The costs of remedial measures (e.g. the clean-up and reinstatement of the environment if this is not covered by the words "reduction measures");

(*b*) The costs of compensatory measures (compensation to victims of damage);

(*c*) The costs of "ecological" damage (compensation for damage to the environment in general, to the ecological system, compensation to public authorities for residual damage, fines for excessive pollution, etc.);

(*d*) The costs of pollution charges or equivalent economic instruments (tradable emission rights, pollution tax, eco-tax, etc.).[228]

193. Implementation of the polluter-pays principle has not been easy. In spite of their strong commitment to encourage the adoption of the principle in the national policies of various countries, and particularly in Europe, States have found various ways of justifying subsidy schemes by interpreting the polluter-pays principle according to

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[219] Rao, "Environment as a common heritage of mankind: a policy perspective", p. 208.

[220] See *Yearbook … 1995*, vol. II (Part One), document A/CN.4/471, p. 80, para. 102.

[221] See Gaines, "The polluter-pays principle: from economic equity to environmental ethos", p. 470.

[222] See the appendix to OECD recommendation C (89)88 of 7 July 1989, cited in *Yearbook … 1995*, vol. II (Part One), document A/CN.4/471, p. 80, para. 106.

[223] Ibid., para. 112.

[224] See Gaines, loc. cit., pp. 480–484.

[225] *Yearbook … 1995*, vol. II (Part One), document A/CN.4/471, p. 81, para. 114.

[226] See footnote 37 above.

[227] Economic instruments used in national laws and regulations include deposit/refund schemes, pollution fines, eco-management systems and eco-labelling systems. The polluter-pays principle has also been implemented by various means, ranging from pollution charges, process and product standards to systems of fines and liabilities. See E/CN.17/1997/8, paras. 87–90 (footnote 41 above).

[228] See Smets, "The polluter pays principle in the early 1990s", p. 134.

their convenience.[229] In the context of OECD, during the last 20 years, subsidies have been given in order to facilitate the implementation of environmental policies to take account of existing pollutants, to avoid forcing polluting enterprises to close because of stringent environmental requirements. Most OECD member countries are still providing direct or indirect financial aid to polluters and few of them have decided that all pollution-related costs shall henceforth be borne by polluters. In Southern Europe, the European Community is providing a significant amount of subsidies to aid countries in their environmental policies, sometimes for the purpose of implementing existing directives which were adopted without any linkage to the availability of Community funds.

194. Accordingly, the problem of abuse in the application of the polluter-pays principle has become a matter of some concern. To deal with such abuse, prevention procedures were developed within OECD. Thus, any Government which considers that a pollution control subsidy provided by another member country might introduce a significant distortion in international trade and investment may request that a consultation be initiated to establish whether assistance is in conformity with OECD guidelines. In the European Community, the Commission issued specific guidelines and can bring the case to the European Court of Justice which would examine whether the proposed subsidy is in conformity with article 92 of the Treaty of Rome and with other applicable texts. However, it is observed that no case of excessive subsidy in the area of pollution control was brought to the attention of the European Court of Justice or of OECD.[230]

195. There is thus a need for further clarity on various issues involved in the definition and application of the polluter-pays principle: clarification of the control costs to be borne by the polluter, valid exceptions to the polluter-pays principle, sharing of the pollution costs between the public bodies and polluters, and the most appropriate schemes and methods by which internalization could be achieved.

196. The application of the principle in a transboundary context could also give rise to several problems between the State of origin and the affected States. While in principle one might consider that costs of pollution control measures are to be carried out in the State of origin, exceptions could also be foreseen whereby such States could receive a subsidy to undertake pollution control measures.

197. The practice of OECD countries reveals that at the international level States very rarely pay for transboundary damage because it is up to the polluter to compensate the victims. Secondly, subsidies are very rare and polluting OECD members generally implement pollution control measures without any financial support from other member countries. There could however be some exceptions. Industrialized countries may subsidize developing countries. Even within the European Community, member States provide financial mechanisms to support other member States such as Greece, Ireland, Portugal and Spain. In the Arctic area, Scandinavian countries offer financial assistance to the Russian Federation. Similarly, such assistance was also provided to Eastern European countries to enhance the safety of Soviet-made nuclear reactors. Inter-State subsidies thus can also be used to overcome a historical situation detrimental to the environment.[231]

198. The practice is still evolving. Accordingly, it has been observed that "[a]t present, it is difficult to know whether PPP [polluter-pays principle] is adhered to because there is too much uncertainty on what is allowed and what is forbidden concerning subsidies or other fiscal measures for the benefit of polluters inside industrialized countries and also among developed and less developed countries".[232] For these and other reasons, it was also observed that "PPP was introduced in numerous international agreements as a guiding principle or as a binding principle but in general the meaning of this principle was not specified".[233]

199. Accordingly, Kiss considered the principle only as one of guidance for the economy and not a legal principle.[234] Sands noted that the polluter-pays principle has not achieved the broad geographic and subject-matter support that has been accorded to the principle of preventive action. He also noted that negotiations concerning principle 16 of the Rio Declaration indicated that a number of States, both developed and developing, would like to see these principles adopted only at the domestic level but not to apply to or govern relations or responsibilities between States at the international level.[235] Brown Weiss also shared this view and stated that the polluter-pays principle "does not translate easily into a principle of liability between states".[236]

C. The principles of equity, capacity-building and good governance

200. In the context of the development of international environmental law at Rio de Janeiro in 1992, the question of giving suitable priority to the interests and limitations of developing countries was given specific consideration. While a number of principles included in the Rio Declaration exhibited a sensitivity to the aspirations, needs and limitations of developing countries, difficulties remained in reconciling the special needs of developing countries

[229] See *Yearbook … 1995*, vol. II (Part One), document A/CN.4/471, p. 81, para. 113. See also E/CN.17/1997/8 (footnote 41 above).

[230] Smets, loc. cit., p. 140.

[231] Ibid., pp. 141–144; see also Brownlie, "State responsibility and international pollution: a practical perspective", in *International Law and Pollution*, cited in Magraw, "Legal treatment of developing countries: differential, contextual, and absolute norms", p. 83, footnote 53.

[232] Smets, loc. cit., pp. 143–144.

[233] Ibid., p. 133. One example of this is the reference to the polluter-pays principle in the 1990 International Convention on Oil Pollution Preparedness, Response and Cooperation as "a general principle of international environmental law". See also the 1992 Convention on the Transboundary Effects of Industrial Accidents, which takes into account that the polluter-pays principle is a general principle of environmental law.

[234] Kiss, "The Rio Declaration on Environment and Development", p. 61.

[235] Sands, "International law in the field of sustainable development: emerging legal principles", p. 66.

[236] Brown Weiss, "Environmental equity: the imperative for the twenty-first century", p. 21.

with the need to develop a universally applicable legal regime. Several ideas concerning intra-generational and inter-generational equity, capacity-building and good governance were discussed in this context.

1. Intra-generational equity

201. To put this matter in perspective, it is necessary first to recall briefly the special circumstances of developing countries. According to a recently published survey of the United Nations, it is predicted, based on certain assumptions, that the world population will grow to 9.4 billion by 2050 and will stabilize at around 11 billion by 2200. In contrast, in 1995, the world population stood at 5.7 billion. While Europe will see a declining trend in population growth by about 18 per cent from 728 million in 1995 to 595 million by 2150, the population in the United States and Canada will grow from 297 million in 1995 to 424 million by 2150. Further, the population in Asia, Africa and Latin America will also register a substantial increase from 1995 to 2150. Accordingly, Africa's population will grow from 700 million to 2.8 billion, China's will grow from 1.2 billion to 1.6 billion, India's from 900 million to 1.7 billion and the population of Latin America and the Caribbean will grow from 477 million to 916 million.[237] The enormous growth in population in the developing world must also be seen against the background of persistent poverty levels there.[238] In other words, unless miracles occur, much of this population in the developing world will live at the edge of poverty and will continue to confront a gap between the rich and the poor in terms of living standards. The priorities for the Governments of developing countries will continue to be providing food, clothing, shelter, minimal literacy and health standards through safe drinking water, sanitation facilities and primary health centres for their massive populations. While some attention will have to be paid to the liberalization of national trade policies and the globalization of trade, attracting investments and improving the infrastructure facilities for industry, these Governments will still have to allocate their limited resources on a priority basis to providing employment and fulfilling the other minimum vital needs of their population.

202. In addition to the above, it is also well known that the means of production and technologies at the disposal of developing countries are inefficient as well as environmentally unfriendly.

203. In these circumstances, the first question that arises in the context of promoting sustainable development is how to bridge the gap between developed and developing countries on the one hand and between rich and poor within countries on the other. The latter question should largely be addressed in the context of good governance, while the former question should be addressed in the context of equity, particularly intra-generational equity.

204. Intra-generational equity has several implications for the South.[239] It would mean, first, that the developmental needs of the South should continue to receive priority in any effort to promote a better global environment. Secondly, any regime providing for the protection of the environment should yield in favour of the South adequate environmental space for its future development. There is thus a need to enable developing countries to continue to utilize the technology available to them until they are in a position to acquire or develop more environmentally friendly technology. In other words, it is the view of the South that the North, with consumption levels at 80 per cent and only 20 per cent of the world's population, should not pre-empt high levels of global environmental space capable of absorbing pollution. Thirdly, developing countries must be given sufficient room within the current environmental constraints to develop rapidly enough to meet the needs and aspirations of their growing population by securing the necessary resources, technology and access to the markets of the world. This underlines the fact that the South can only achieve environmentally sound protection, development and lifestyle through the attainment of economic growth and development.

205. In view of the concerns thus expressed, principles 1, 3–7, 11 and 25 of the Rio Declaration reflect the interests of developing countries and the equities involved.[240] The important point of intra-generational equity is to avoid economic development taking "place in all countries on the environmental backs of the poor communities".[241] Application of the principle of equity could involve the development of a differential and con-

[237] See the projection made by the United Nations Population Division, based on a medium-fertility rate of two children per woman (*The Hindu*, 8 February 1998, p. 7).

[238] While it is understandable that there will be differences of opinion as to how to measure and conceptualize poverty, it has been suggested that, according to the criterion of "calorie consumption"—the prevailing measure of poverty in India—a daily calorie consumption of under 2,100 among urban dwellers and less than 2,400 in rural areas is a mark of poverty. Thus, in India alone, while the rural poverty level of 57.79 per cent in 1977–1978 decreased slightly to around 57.4 per cent in 1993–1994, in the urban sector the 1977–1978 level of 49.28 per cent rose to 65.4 per cent in 1993–1994. See Gupta, "Poverty and statistics", p. 12.

[239] On the general question of role of equity, see Schachter, *International Law in Theory and Practice*, pp. 50–65. See also Franck and Sughrue, "The international role of equity-as-fairness". For an analysis of the positions taken by the South at the Rio Conference, see Mensah, "The role of the developing countries", p. 36.

[240] Principle 1 emphasized that human beings are at the centre of concerns for sustainable development. Principle 3 noted that the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations. Principle 4 aimed at achieving sustainable development and making environmental protection an integral part of the development process. Principle 5 required States to cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development. Principle 6 required special priority to be given to the special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable. Principle 7 dealt with common but differentiated responsibilities. Principle 11 noted that, while environmental standards, management objectives and priorities should be developed, standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries. Finally, principle 25 underlined that peace, development and environmental protection are interdependent and indivisible. For an analysis of these principles, see E/CN.17/1997/8 (footnote 41 above).

[241] Brown Weiss, "Environmental equity: the imperative for the twenty-first century", p. 17. It has been observed that the proposition on environmental justice advanced by Brown Weiss addressed the deep structure of the international legal order and would have to be understood in the context of the process of fundamental change or development, as one wished, of the international legal order beginning with decolonization and continuing with the so-called new international economic order process (Ginther, "Comment on the paper by Edith Brown Weiss").

textual norm in the evolving and interconnected areas of economic development, human rights and environmental protection/resources management law. On the basis of an examination of some relevant treaty regimes and other declarations and State practice, according to one observer, when fashioning international environmental norms, there is arguably an existing, general customary obligation, stemming primarily from State practice in those three areas, to take the effect on sustainable development in developing countries into account, in order to foster, or at least avoid unduly interfering with, such development and in order to ensure that the resultant norms are not impossible to comply with. Similarly, it may be argued that developed countries have a duty under customary law to assist developing countries in meeting international environmental norms relating to the progressive realization of international human rights.[242]

2. Inter-generational equity

206. The principle of inter-generational equity is of more recent origin. The 1972 Stockholm Declaration referred to inter-generational equity in principles 1 and 2.[243] Thereafter, references were made to the principle of inter-generational equity in several multilateral conventions.[244]

207. The Experts Group on Environmental Law of the World Commission on Environment and Development, which reviewed the merits of providing for the principle of inter-generational equity, recommended that States should "ensure that the environment and natural resources are conserved and used for the benefit of present and future generations".[245] This principle later found its place in the context of sustainable development. Thus principle 3 of the Rio Declaration reads as follows: "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations."[246]

208. In the context of inter-generational equity, the environment is viewed more as a resource base for the survival of present and future generations. It has been observed that a twofold duty flows from this principle.[247] First, States have a basic duty to conserve options for future generations by way of trust by maintaining to the maximum extent possible the diversity of the natural resource base (a protective element). The second obligation concerns the prevention or abatement of pollution or other forms of degradation of natural resources or the environment which would reduce the range of uses to which the natural resources or environment could be put or which would confront future generations with enormous financial burdens to clean up the environment. It is this second obligation which is more relevant in the context of the present consideration of the principle of prevention.

209. The principle of inter-generational equity is also mentioned in the 1996 Istanbul Declaration on Human Settlements and the Habitat Agenda, which states that "[i]n order to sustain our global environment ... we commit ourselves to ... the preservation of opportunities for future generations".[248] Moreover, the United Nations Framework Convention on Climate Change refers to this principle in article 3, paragraph 1, as does the Convention on biological diversity in its last preambular paragraph.[249] In spite of such references to this principle in many international conventions and in other contexts,[250] the specific

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[242] See Magraw, loc. cit., p. 99.

[243] Principle 1 of the Stockholm Declaration read as follows:

> "Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating *apartheid*, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated".

And according to principle 2:

> "The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate."

[244] Some of the relevant conventions are: the 1972 Convention for the Protection of World Cultural and Natural Heritage; the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora; the 1976 Convention for the Protection of the Mediterranean Sea against Pollution; the 1976 Convention on the Conservation of Nature in the South Pacific; the 1976 Convention on the prohibition of military or any other hostile use of environmental modification techniques; the 1978 Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution; the 1979 Convention on the Conservation of European Wildlife and Natural Habitats; the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region; and the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources. Article 30 of the Charter of Economic Rights and Duties of States, General Assembly resolution 36/7 of 27 October 1981 on the historical responsibility of States for the preservation of nature for present and future generations, and the World Charter for Nature, annexed to General Assembly resolution 37/7 of 28 October 1982, have also made reference to the principle of inter-generational equity.

[245] Article 2 of the General Principles concerning Natural Resources and Environmental Interferences, *Environmental Protection and Sustainable Development* … (footnote 45 above), pp. 42–45.

[246] For a review of the principle, see E/CN.17/1997/8 (footnote 41 above), paras. 24–28.

[247] See *Environmental Protection and Sustainable Development* … (footnote 45 above), p. 43.

[248] *Report of the United Nations Conference on Human Settlements (Habitat II), Istanbul, 3–14 June 1996*, chap. I, resolution I, annex I, para. 10 (United Nations publication, Sales No. E.97.IV.6).

[249] Article 3, paragraph 1, of the United Nations Framework Convention on Climate Change states: "The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof." The last preambular paragraph of the Convention on biological diversity reads: "*Determined* to conserve and sustainably use biological diversity for the benefit of present and future generations."

[250] The haziness of its content did not deter the invocation of this principle in international jurisprudence. See the separate opinion of Judge Weeramantry in the case concerning *Maritime Delimitation in the Area between Greenland and Jan Mayen, Judgment, I.C.J. Reports 1993*, p. 211. See also his dissenting opinion in the *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the* Nuclear Tests (New Zealand *v.* France) *Case, Order of 22 September 1995, I.C.J. Reports 1995*, p. 288, where he observed that the concept of inter-generational rights is an important and rapidly developing principle of contemporary environmental law (ibid., p. 341). The Supreme Court of the Philippines has granted standing to 42 children as representatives of themselves as a future generation to protect their right to a healthy environment (the Children's Case) (see judgement of 30 July 1993, *Juan Antonio Oposa and others* v. *the Honourable Fulgencio S. Factoran and*

content thereof is not entirely clear. It has been pointed out that "[t]he nature and the extent of the right is left open, as is the question of whether such a right attaches to States, peoples or individuals".[251] To the extent that the principle is linked to the right to development, its implementation raises its own difficulties. In spite of doctrinal and conceptual problems, the right to development is gaining ground as an essential attribute of human rights and the general principle of equity.[252]

210. In an effort to clarify the content of the principle of inter-generational equity, it has been suggested that the following steps may be taken:[253]

(*a*) Requiring present generations to use their resources in a way that protects the sustainable development of future generations;

(*b*) Committing to the long-term protection of the environment;

(*c*) Ensuring that the interests of future generations are adequately taken into account in policies and decisions relevant to development;

(*d*) Avoiding and, if need be, redressing disproportionate environmental harm from economic activities;

(*e*) Ensuring a non-discriminatory allocation of current environmental benefits.

211. Many imaginative proposals have been put forward by commentators regarding an implementation strategy. According to one view, the rights of future generations might be used to enhance the legal standing of members of the present generation to bring claims on behalf of the former, by relying on substantive provisions of environmental treaties where doubts exist on the implementation of rights created and obligations enforceable by individuals.[254] Another commentator felt that reliance on the liability doctrine failed to address the external realities and to ensure equitable use; she therefore advocated a preventive approach to implement the principle of inter-generational equity.[255] It is evident that the pollution prevention approach reflects a growing willingness to relate the present to the future in the formulation of legal norms. Prevention of pollution from nuclear reactors which affects the ability of future generations to use natural resources and prevention of pollution to biological resources, water and soils would also help promote inter-generational equity.[256]

3. Capacity-building

212. Compliance with international environmental obligations in general and with obligations concerning the prevention of transboundary harm in particular involves the capacity of a State to develop appropriate standards and to bring more environmentally friendly technologies into the production process as well as the necessary financial, material and human resources to manage the process of development, production and monitoring of the activities. There is also a need to ensure that risk-bearing activities are conducted in accordance with applicable standards, rules and regulations and that the jurisdiction of courts may be invoked in respect of violations to seek necessary judicial and other remedies. Many developing countries are just beginning to appreciate the ills of pollution and unsustainable developmental activities. It has therefore been rightly pointed out that compliance with international environmental obligations requires resources, including technologies and technical expertise, that are not readily available, particularly in developing countries. A spirit of global partnership[257] is therefore recommended to enable developing countries and countries in transition to discharge the duties involved, in their own self-interest as well as in the common interest. Such a global partnership could entail, as in the case of some specific international environmental treaties, offering financial support through the development of common funds, facilitating the transfer of appropriate technology on fair and equitable terms[258] and providing necessary training and technical assistance.

another, Supreme Court of the Philippines, G. R. No. 101083). See also *M. C. Mehta* v. *Union of India (Tanneries)*, AIR 1988 Supreme Court 1115 (public interest litigation to prevent tanneries, which were polluting the River Ganga, from operating until they installed a primary effluent treatment plant). See for this and other cases, *Compendium of Summaries of Judicial Decisions in Environment Related Cases* (with special reference to countries in South Asia), SACEP/UNEP/NORAD Publication Series on Environmental Law and Policy No. 3 (1997).

[251] E/CN.17/1997/8 (footnote 41 above), para. 24. For a similar view, see also Sands, op. cit., p. 200. Another commentator has lamented that future generations are not effectively represented in the decision-making process today though decisions taken today would determine their welfare (Brown Weiss, "Intergenerational equity: a legal framework for global environmental change"), pp. 385 and 410–412. The same commentator also accuses the present generation of being biased in favour of itself (Brown Weiss, "Environmental equity: the imperative for the twenty-first century", p. 22).

[252] On the questions raised by the right to development, see Bulajić, *Principles of International Development Law*; Forsythe, *Human Rights and Development*; Hossain and Choudhury, eds., *Permanent Sovereignty over Natural Resources*; McDougal, Lasswell and Chen, *Human Rights and World Public Order: The Basic Policies of an International Law of Human Dignity*; Mutharika, "The principle of entitlement of developing countries to development assistance", pp. 154–236. See pages 237–351 (ibid.) for an analysis of the text of instruments relevant to this principle; Lachs, "Introduction of the subject: the right to development"; Rich, "The right to development as an emerging human right", pp. 305–306; Haq, "From charity to obligation: a third world perspective on confessional resource transfers", p. 389. See also Gandhi, *Right to Development in International Law: Prospects and Reality.*

[253] UNEP/IEL/WS/3/2 (footnote 44 above), annex I, p. 13.

[254] See Sands, op. cit., pp. 158–163 and 200. Brown Weiss also supports the proposal on the designation of an ombudsman for future generations or the appointment of commissioners for future generations (Brown Weiss, "Intergenerational equity …", pp. 410–412).

[255] Brown Weiss, "Environmental equity: the imperative for the twenty-first century", p. 22. It was also suggested that this principle could comprise three components: comparable options defined as conserving the diversity of natural and cultural resources; comparable quality; and comparable or non-discriminatory access to the benefits of the environmental system (Brown Weiss, "Environmental equity and international law", p. 15).

[256] Ibid., "Environmental equity and international law", p. 14.

[257] See UNEP/IEL/WS/3/2 (footnote 44 above), para. 14.

[258] The problem of transfer of technology was a matter of intensive study in different forums. For one such study prepared in the context of the development of the law relating to the new international economic order, see Espiritu, "The principle of the right of every State to benefit from science and technology". For a review of the obligation of transfer of technology incorporated in the United Nations Convention on the Law of the Sea, see Yarn, "The transfer of technology and UNCLOS III", p. 138.

213. Transfer of technology and scientific knowledge would require overcoming several well-known complications affecting such transfer, namely, restrictive practices of suppliers of technology, deficiencies in the bargaining process between the suppliers of technology and the developing countries and reallocation of a greater share of productive capacity to the developing countries.[259] What is also required is technology transfer which takes into account the conditions prevailing in developing countries. Dissemination and transfer of scientific knowledge give rise to problems governed by the law relating to patents and copyrights. It is admitted that transfer of technology and scientific knowledge should be undertaken under proper legal arrangements and regimes. Further, such transfer should be at a fair and reasonable cost. However, given the limited resources and urgent priorities of development, developing countries must be helped by the international community to acquire appropriate technology and scientific knowledge. For this purpose, international funding mechanisms and technical training programmes could be established. Such capacity-building of developing countries would be in the common interest of all States as it would promote greater compliance with duties of prevention.[260]

214. Apart from the need for international transfer of resources and technology and technical skills to developing countries and countries in transition, capacity-building would involve addressing and remedying numerous weaknesses, deficiencies and difficulties such as: weak or inadequate legislation, the lack of political influence of environmental authorities, low public awareness, lack of well-established target groups which represent specific interests, the lack of managerial skills and inadequate information bases. Strengthening institutional capabilities would imply decentralization and delineation of structures of authority and power between the federal and State Governments and between the State and the local authorities or municipalities; establishment of data centres, expert consultative bodies and monitoring bodies to improve enforcement and compliance with environmental permits, licences and EIA requirements; halting activities which violate environmental regulations; and ensuring preparedness measures for environmental emergencies. In addition, multidisciplinary, integrated research programmes should be promoted to better understand pollution transfer mechanisms, to apply the ecosystem approach to environmental management as well as to develop low- and non-waste technology. Continuous training for environmental administrators at all levels should be organized with particular attention to building and improving skills and knowledge of environmental law, environmental economics, environmental impact and risk assessment and auditing as well as conflict-resolution techniques.[261]

215. Agenda 21 envisaged a concerted and coherent approach linking a number of the above components to promote endogenous capacity-building. Environmental legislation touching upon various sectors of development-related activities has an important contribution to make towards promoting the capacity of a State to prevent transboundary harm.[262] In order for environmental law to become sound and effective it must be implemented through appropriate administrative and institutional practices and by the establishment of specialized tribunals dealing with environmental law matters or cases.[263]

4. Good governance

216. Several of the above requirements for enhancing the capacity of States to meet their duties of prevention culminate in the need for the maintenance of good governance to sustain the absorption of the inputs made and to profit therefrom so as to further improve such governance. Good governance is said to comprise the rule of law, effective State institutions, transparency and accountability in the management of public affairs, respect for human rights and the meaningful participation of all citizens in the political processes of their countries and in decisions affecting their lives.[264] It has also been stated that improving and enhancing governance is an essential condition for the success of any agenda or strategy for development. Improved governance could mean ensuring the capacity, reliability and integrity of the core institutions of the modern State. It could also mean improving the ability of government to carry out governmental policies and functions, including the management of implementation systems.[265]

217. Good governance in effect comprises the need for the State to take the necessary legislative, administrative or other actions to implement the duty of prevention, as

[259] For a discussion of these and other issues concerning technology-sharing, see Schachter, *Sharing the World's Resources*, p. 107.

[260] Despite the existence of profound differences in the allocation of goods and costs which are manifest in the negotiations about laws of competition, restrictive practices, patents, dispute settlement and *ordre public* in transnational contracts, States are moved by imperatives of justice and agree to principles of fairness through motives of: conscience, particularly when appeals are made on the basis of firm data and fundamental principles of legitimacy; interdependence; and a shared commitment to democratic, open and discursive processes not only within but among States. See Franck, "Fairness in the international legal and institutional system: general course on public international law", pp. 440–441.

[261] For an elaboration of these and other considerations, see *Guidelines on Integrated Environmental Management in Countries in Transition* (United Nations publication, Sales No. E.94.II.E.31), pp. 3–8.

[262] In pursuit of these various objectives, UNEP capacity-building programmes are based upon several fundamental considerations and have been organized in the area of national legislation and institutions, and of participation in the international legislative process, as well as with respect to specific target groups. UNEP programmes in capacity-building are conducted in association and collaboration with several agencies and bodies of the United Nations system as well as international organizations, universities and professional bodies. For an elaboration of these themes, see Kaniaru and Kurukulasuriya, "Capacity building in environmental law".

[263] Referring to the situation of environmental problems in India and particularly those affecting megacities such as Delhi, Krishna Iyer, a former Supreme Court judge of India, noted that "Delhi has the notoriety of being the fourth-most polluted city in the world, not because of statutory starvation but of law-enforcing lassitude". In this connection, he reviewed the National Environmental Tribunal Act, which proposes to establish special environmental tribunals in India; see Krishna Iyer, "Environmental Tribunal I and II".

[264] See report of the Secretary-General on the work of the Organization, *Official Records of the General Assembly, Fifty-second Session, Supplement No. 1* (A/52/1), para. 22.

[265] See Boutros-Ghali, *An Agenda for Development*, pp. 45–46, paras. 125–126.

noted in article 7 of the draft approved by the Working Group of the Commission in 1996.[266] The requirement of taking the necessary measures imposed upon the State by way of good governance does not entail its becoming involved in all the operational details of the hazardous activity, which are best left to the operator himself. Thus, where these activities are conducted by private persons or enterprises, the obligation of the State is limited to establishing an appropriate regulatory framework or machinery to ensure effective implementation of the legal regime established by the State itself in accordance with its national legislation. Such a framework could be a matter of ordinary administration in most cases, and in the case of disputes, the relevant courts or tribunals should be established to provide for speedy and efficient legal remedies.[267]

218. In developing a national legislation, it has been found convenient to first construct an umbrella or a framework environmental law which lays down the basic legal principles without attempting to codify all relevant statutory provisions. Such legislation contains a declaratory statement of national environmental goals, establishes institutions for environmental management and provides for decision-making procedures, licensing and enforcement, planning and coordination, and dispute resolution, among other environmental management mechanisms.[268] Framework legislations usually call for further supplementing legislations and rules and regulations. Moreover, the aim of an environmental legislation should be to develop long-term management of threatened resources, conservation of scarce resources and prevention of degradation of renewable resources. In the context of the prevention of transboundary harm, such legislation should also provide for adequate safeguards to take into account the environmental needs of neighbouring States in regulating an activity where significant harm to such interests is possible or evident.

219. An examination of the requirement of adopting appropriate measures and suitable legislation indicates that, by way of good governance, States must: attempt to avoid the creation and operation of a multiplicity of laws and institutions; provide for coordination among institutions at the national, regional or local level; ensure strict enforcement of national laws and policies with the support of necessary infrastructure and resources, eliminating corruption and extraneous influences; recognize public interest; adopt integrated and holistic legislation and policy; and avoid ad hoc administrative decisions.[269] It is also recommended that statutory authorities be established as a central agency supported by enforcement, regulatory and intervention powers to deal with prevention of harm and protection of the environment. The legal independence of the agency should be enhanced by financial independence. Such an agency should be designed as an empowering institution, that is, its powers should strengthen existing institutions, while at the same time it should provide a focal point for strategic alliance at the local level.[270]

220. In addition, in the context of the prevention of transboundary harm, neighbouring States and States of the region should attempt to harmonize national laws, standards and other procedures concerning the operation of hazardous activities. This is highly necessary in order to have a more uniform and voluntary implementation of the duties of prevention involved and to avoid any differences in opinion or disputes which might otherwise arise.[271]

221. Public participation is an essential requirement of good governance. Keeping this in view, article 15 of the draft approved by the Working Group in 1996 states that States shall, whenever possible and by such means as appropriate, provide their own public likely to be affected by a hazardous activity with information relating to the activity, on the risk involved and the harm which might result and ascertain their views. This recommendation takes into consideration principle 10 of the Rio Declaration, which provides for public involvement in such decision-making processes. A number of other instances where such public participation is encouraged were also noted by the Working Group.[272]

222. The "public" includes individuals, interest groups (including non-governmental organizations) and independent experts. By "general public" is meant individuals who are not organized into groups or affiliated to specific groups. Public participation could be encouraged by holding public meetings or hearings which are announced in newspapers, radio and television. The public should be given opportunities for consultation and their participation should be facilitated by providing them with the necessary information on the proposed policy, plan or programme which is likely to have significant transboundary effects. However, requirements of confidentiality may affect the extent of public participation during the assessment process. Moreover, the public is frequently not involved or only minimally involved in efforts to determine the scope of a policy, plan or programme, EIA, or in the review of a draft document. Its participation is useful, however, in obtaining information regarding concerns related to the proposed action, additional alternatives and the potential environmental impact.[273]

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[266] *Yearbook … 1996*, vol. II (Part Two), annex I, p. 101.

[267] Rao, "International liability arising out of acts not prohibited by international law: review of current status of the work of the International Law Commission", p. 102.

[268] See Kaniaru and others, "UNEP's programme of assistance on national legislation and institutions", p. 161.

[269] See Herbert, loc. cit., p. 1214.

[270] Ibid., pp. 1215–1217.

[271] In order to help common understanding, and wherever applicable to develop internationally acceptable units and standards in transboundary EIA, ISO and the European Committee for Standardization have been focusing on such items as: sampling and monitoring methods, descriptive units (for example, μg/m3 for air quality), spatial and temporal scales control (e.g. volume of soil samples) and criteria for data quality control. It seems necessary to enlarge the scope of ongoing standardization activities. See *Current Policies* ... (footnote 157 above), p. 50.

[272] *Yearbook … 1996*, vol. II (Part Two), annex I, pp. 123–124.

[273] *Application of Environmental Impact Assessment Principles* ... (footnote 160 above), pp. 4 and 8. The World Bank recognizes that when a country's environmental problems are addressed, the chances of success are greatly enhanced if the local citizens are involved in efforts to manage pollution and waste. The Bank's rationale is based on four premises: first, local citizens are often better equipped than government officials in identifying priorities for action. Secondly, members of local communities often have knowledge of cost-effective solutions that are

(*Continued on next page.*)

223. Apart from the desirability of encouraging public participation in national decision-making on vital issues regarding development and the tolerance levels of harm in order to enhance the legitimacy of and compliance with the decisions taken, it is suggested that, given the development of human rights law, public participation could also be viewed as a growing right under national law as well as international law. However, it has also been noted that, "[w]hile norm-specification is likely to continue in this, as in most areas of international law, the future emphasis needs to be on monitoring, and especially on the unresolved problem of enforcing compliance with the norms that already exist".[274]

Conclusions

224. Until 1992, the Commission had been developing the concept of prevention as part of its work on international liability for injurious consequences arising out of acts not prohibited by international law. The concept thus developed indicated some duties that are essentially projected as obligations of conduct. Accordingly, the duties of prevention would oblige States to identify activities that are likely to cause significant transboundary harm and to notify the same to the States concerned. The duty of notification would naturally give rise to duties of consultation and negotiation. However, such duties would not involve any right of veto for other States in respect of activities to be undertaken within the territory of a State. Moreover, these duties also would not oblige States to agree on a regime invariably in every instance where risk of such significant transboundary harm is involved.

225. However, a State in whose territory a risk-bearing activity is planned is obliged because of the duty of prevention to undertake measures of prevention on its own, that is, unilateral measures of prevention, if there is no agreement between that State and the States likely to be affected. Such measures of prevention would involve the duty of due diligence or standards of care as are proportionate to the risk involved and the means available to the State concerned. The standard of due diligence could vary from State to State, from region to region and from one point in time to another.

226. Under the scheme developed, in the absence of harm, failure to perform the duties of prevention, as proposed, or non-compliance with obligations of conduct would not give rise to any legal consequences. However, such failure could give rise to some adverse inferences in respect of the State of origin or other entities involved, when the claim for reparation as part of liability was under consideration.

227. The concept of prevention thus developed has been generally endorsed. Some reservations were however expressed emphasizing the need to develop better guarantees for implementation of the duties of prevention.

228. The present effort of the Commission to separate the regime of prevention from the regime of liability provides it with an opportunity to take a fresh look at the question of consequences to be attached to the failure to comply with duties of prevention. For this purpose, it would be necessary to distinguish duties of prevention attached to the State from duties attached to the operators of risk-bearing activities.

229. Failure of duties of prevention attached to the State could be dealt with at the level of State responsibility or even as a matter of liability without attaching a taint of wrongfulness to or prohibiting the activity itself. The latter is the option adopted by the Commission so far. It could be endorsed, given the desirability of respecting the freedom of a State and the sovereignty it enjoys over its territory and resources in undertaking necessary developmental and other beneficial activities, irrespective of their adverse side effects, if suitable alternatives are not available. However, if there is strong support, the Commission could move the matter of consequences into the field of State responsibility.

230. In contrast, failure of the operator to comply with duties of prevention would and should attract the necessary consequences prescribed in the national legislation under which authorization is sought and given. Mostly they are civil penalties and, in extreme cases, entail cancellation of the permission to carry on the activity.

231. The various duties of prevention identified as principles of procedure and content are duties States are expected to undertake willingly and voluntarily, as their application would be in their own interest. A review of the principles amply showed that State practice in implementation is both evolving and flexible. Further, States have been showing a considerable degree of pragmatism by often not insisting on their rights but encouraging other States and operators and helping them to meet their obligations through incentives and application of economic instruments. Even though there has so far been some laxity on the part of States to meet their obligations in contributing to international funds established for enhancing the capacity of developing States to enable them to better meet their obligations, no doubt is cast upon the nature of the obligation itself.

232. The need to give due consideration to the needs, special circumstances and interests of developing countries in developing a regime of prevention is fully established. Such consideration is necessary while prescribing standards of care and in enabling such States to apply and enforce those standards. The case of States which are capable of showing sensitivity to the obligations established or undertaken but do not do so is admittedly different from those States which are willing but unable to implement them for good reason or for reasons beyond their control. The application of various principles of procedure and content noted as part of the concept of prevention would no doubt require a considerable amount of international

(*Footnote 273 continued.*)

not available to the Government. Thirdly, it is often the motivations and commitment of communities that see an environment project through to completion. Fourthly, citizen involvement can help build constituencies for change. See Mammen, "A new wave in environmentalism", p. 21.

[274] See Franck, loc. cit., p. 110. See also Craig and Ponce Nava, "Indigenous peoples' rights and environmental law".

cooperation, time and effort for them to acquire concrete shape and a firm base necessary for universal implementation.

233. The recommendations made by the Working Group of the Commission in 1996 cover many of the principles that form part of the concept of prevention. The Commission would be in a position to review their content and to take a decision on their inclusion in the regime of prevention it wishes to endorse, once it approves the general orientation and analysis of the content of the concept of prevention.