

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, prepared by the Secretariat**

Topic:  
**International liability for injurious consequences arising out of acts not prohibited by international law**

Extract from the Yearbook of the International Law Commission:-  
**1985, vol. II(1)/Add.1**

*Downloaded from the web site of the International Law Commission  
(<http://www.un.org/law/ilc/index.htm>)*

# INTERNATIONAL LIABILITY FOR INJURIOUS CONSEQUENCES ARISING OUT OF ACTS NOT PROHIBITED BY INTERNATIONAL LAW

[Agenda item 8]

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, prepared by the Secretariat

[Original: English]  
[16 October 1984]

### CONTENTS

		Page
Abbreviations .....		3
Note concerning quotations .....		3
	Paragraphs	
INTRODUCTION .....	1-19	4
<i>Chapter</i>		
I. ACTIVITIES CAUSING INJURIES BEYOND THE TERRITORIAL JURISDICTION OR CONTROL OF THE STATE WHERE THEY ARE CONDUCTED .....	20-54	6
A. Forms of activities .....	20-36	6
(a) Multilateral agreements .....	23-27	7
(b) Bilateral agreements .....	28-31	8
(c) Judicial decisions and State practice other than agreements .....	32-36	8
B. Location of origin of activities .....	37-54	8
1. Activities conducted within the territorial jurisdiction or under the control of the ac- ting State .....	39-49	9
(a) Multilateral agreements .....	40-43	9
(b) Bilateral agreements .....	44-46	9
(c) Judicial decisions and State practice other than agreements .....	47-49	10
2. Activities conducted outside the territorial jurisdiction or control of the acting State ...	50-54	10
(a) Multilateral agreements .....	50-52	10
(b) Bilateral agreements .....	53	11
(c) Judicial decisions and State practice other than agreements .....	54	11
II. ASSESSMENT OF ACTIVITIES FOR THEIR INJURIOUS IMPACT .....	55-248	11
(a) Multilateral agreements .....	56-60	12
(b) Bilateral agreements .....	61-64	13
(c) Judicial decisions and State practice other than agreements .....	65-68	13
A. Data collection .....	69-96	14
(a) Multilateral agreements .....	70-75	14
(b) Bilateral agreements .....	76-83	16
(c) Judicial decisions and State practice other than agreements .....	84-96	19
B. Prior negotiation and consultation .....	97-195	22
(a) Multilateral agreements .....	99-103	22
(b) Bilateral agreements .....	104-107	23
(c) Judicial decisions and State practice other than agreements .....	108-113	24
1. Definition of harm .....	114-167	26
(a) Multilateral agreements .....	116-135	27
(b) Bilateral agreements .....	136-150	32
(c) Judicial decisions and State practice other than agreements .....	151-167	35

\* Originally issued under the symbol ST/LEG/15 and Corr.1.

<i>Chapter</i>	<i>Paragraphs</i>	<i>Page</i>
2. Competence to decide what constitutes harm .....	168-195	40
(a) Multilateral agreements .....	170-175	40
(b) Bilateral agreements .....	176-184	41
(c) Judicial decisions and State practice other than agreements .....	185-195	43
C. Balancing of interests .....	196-240	46
(a) Multilateral agreements .....	198-207	46
(b) Bilateral agreements .....	208-215	49
(c) Judicial decisions and State practice other than agreements .....	216-240	51
D. Exoneration from the duty of prior negotiation .....	241-248	56
(a) Multilateral agreements .....	242-244	56
(b) Bilateral agreements .....	245-246	57
(c) Judicial decisions and State practice other than agreements .....	247-248	57
III. PREVENTIVE MEASURES .....	249-340	58
A. Management and monitoring .....	252-299	58
(a) Multilateral agreements .....	252-270	58
(b) Bilateral agreements .....	271-286	63
(c) Judicial decisions and State practice other than agreements .....	287-299	66
B. Provisions for prevention of harm .....	300-340	68
(a) Multilateral agreements .....	301-309	68
(b) Bilateral agreements .....	310-318	69
(c) Judicial decisions and State practice other than agreements .....	319-340	71
IV. GUARANTEES OF COMPENSATION FOR INJURIES .....	341-357	74
(a) Multilateral agreements .....	342-349	74
(b) Bilateral agreements .....	350-352	76
(c) Judicial decisions and State practice other than agreements .....	353-357	76
V. LIABILITY .....	358-508	77
(a) Multilateral agreements .....	384-389	82
(b) Bilateral agreements .....	390-394	83
(c) Judicial decisions and State practice other than agreements .....	395-404	84
A. Balancing of interests .....	405-412	86
(a) Multilateral agreements .....	407-410	86
(b) Bilateral agreements .....	411-412	87
B. Operator's liability .....	413-437	87
(a) Multilateral agreements .....	415-430	88
(b) Bilateral agreements .....	431-434	93
(c) Judicial decisions and State practice other than agreements .....	435-437	93
C. State liability .....	438-483	94
(a) Multilateral agreements .....	439-445	94
(b) Bilateral agreements .....	446-462	95
(c) Judicial decisions and State practice other than agreements .....	463-483	98
D. Exoneration from liability .....	484-508	101
(a) Multilateral agreements .....	485-504	101
(b) Bilateral agreements .....	505-507	105
(c) Judicial decisions and State practice other than agreements .....	508	106
VI. COMPENSATION .....	509-621	106
A. Content .....	510-567	106
1. Compensable injuries .....	510-544	106
(a) Multilateral agreements .....	510-516	106
(b) Bilateral agreements .....	517-521	107
(c) Judicial decisions and State practice other than agreements .....	522-544	108
2. Forms of compensation .....	545-555	111
(a) Multilateral agreements .....	546-549	111
(b) Bilateral agreements .....	550-552	112
(c) Judicial decisions and State practice other than agreements .....	553-555	112
3. Limitation on compensation .....	556-567	113
(a) Multilateral agreements .....	557-563	113
(b) Bilateral agreements .....	564-566	114
(c) Judicial decisions and State practice other than agreements .....	567	115

	Paragraphs	Page
B. Authorities competent to award compensation .....	568-606	115
1. Local courts and authorities .....	570-584	115
(a) Multilateral agreements .....	570-580	115
(b) Bilateral agreements .....	581-583	117
(c) Judicial decisions and State practice other than agreements .....	584	118
2. International courts, arbitral tribunals and joint commissions .....	585-589	118
(a) Multilateral agreements .....	585-586	118
(b) Bilateral agreements .....	587-588	122
(c) Judicial decisions and State practice other than agreements .....	589	122
3. Applicable law .....	590-606	122
(a) Multilateral agreements .....	590-594	122
(b) Bilateral agreements .....	595-601	123
(c) Judicial decisions and State practice other than agreements .....	602-606	123
C. Enforcement of judgments .....	607-621	124
(a) Multilateral agreements .....	608-617	124
(b) Bilateral agreements .....	618-620	126
(c) Judicial decisions and State practice other than agreements .....	621	127

## ANNEXES

	Page
I. Multilateral treaties .....	128
II. Bilateral treaties .....	132
III. Judicial decisions and State practice other than agreements .....	138

## ABBREVIATIONS

ECE	Economic Commission for Europe
IAEA	International Atomic Energy Agency
ICJ	International Court of Justice
IMCO	Inter-Governmental Maritime Consultative Organization (now IMO)
IMO	International Maritime Organization
INTAL	Inter-American Institute of International Legal Studies
OAS	Organization of American States
OECD	Organisation for Economic Co-operation and Development
PCIJ	Permanent Court of International Justice
UNEP	United Nations Environment Programme

\*  
\* \* \*

<i>I.C.J. Reports</i>	ICJ, <i>Reports of Judgments, Advisory Opinions and Orders</i>
<i>P.C.I.J., Series A</i>	PCIJ, <i>Collection of Advisory Opinions</i> (Nos. 1-24, up to and including 1930)
<i>P.C.I.J., Series A/B</i>	PCIJ, <i>Judgments, Orders and Advisory Opinions</i> (Nos. 40-80: beginning in 1931)

## NOTE CONCERNING QUOTATIONS

In quotations, words or passages in italics followed by an asterisk were not italicized in the original text.

Unless otherwise indicated, quotations from works in languages other than English have been translated by the Secretariat.

## Introduction

1. At its thirty-fifth session, in 1983, the International Law Commission requested that three parts of the study prepared by the Secretariat on multilateral and bilateral agreements and judicial decisions and State practice other than agreements relating to the question of international liability for injurious consequences arising out of acts not prohibited by international law be made widely available.<sup>1</sup> The three parts of that study were prepared between 1982 and 1983 for the use of the late Robert Q. Quentin-Baxter, the Special Rapporteur for that topic. At the request of the Commission, the Secretariat has now updated them and combined them in a single volume.

2. It is not the purpose of this study to define, alter or in any way affect the scope or the framework of the subject under consideration by the Commission. The outline of the study and the individual papers were prepared when the Commission was still at the preliminary stage of examining the scope and the framework of the topic. On the basis of prior preliminary studies and taking into account the reports of the Special Rapporteur as well as the Commission's reports on the question, the Secretariat examined the subject, as well as State practice, in a factual context. The presentation of material and information in this document does not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning its content nor on the positions that States may have adopted regarding specific cases or agreements referred to therein.

3. Briefly, the factual context of the subject is marked by the increasingly intensive use in many different forms of the resources of the planet for economic, industrial or scientific purposes. Because of their economic and ecological interdependence, activities occurring within or beyond the territorial control or jurisdiction of States may have an injurious impact on other States or their nationals. To cite only one example, at this stage of the technological revolution, the activities of productive plants may cause harmful consequences which may cross boundaries, causing atmospheric changes through "acid rain" or through river and coastal waters. Furthermore, the scarcity of natural resources, the need for the more efficient use of resources and the creation of substitute resources have led to innovative production methods, sometimes with unpredictable consequences.<sup>2</sup> This *factual* aspect of global interdependence has been demonstrated by events that have frequently resulted in injuries beyond the territorial jurisdiction or control of the acting State.<sup>3</sup>

4. Activities having an extraterritorial injurious impact are also conducted by private entities. These entities operate within the territorial jurisdiction or under the control of the acting State, within the shared domain or within the territorial jurisdiction or under the control of the injured State.<sup>4</sup> For economic reasons, private entities transfer from one State to another hazardous and heavily polluting industries such as those producing steel, aluminium, asbestos and certain toxic chemicals.<sup>5</sup> The injuries may be considerable. Reports indicate that these injuries are not limited to the recipient State, but sometimes cross into neighbouring States, and indeed occasionally even to the original exporting State.<sup>6</sup>

5. Acts with extraterritorial injurious impact have always been met with in international relations and have been of concern to international law. States appear to have recognized that, in the exercise of their exclusive authority within or beyond their territories, over their ships, for example, they are expected to have due regard for the interests of other States that may adversely be affected. The present study reviews a number of examples

<sup>4</sup> The "injured State" or "affected State" refers to the State that has suffered or may suffer injuries as a result of an activity by the acting State. The injuries may be to the State's property or the private property of its nationals.

<sup>5</sup> These polluting industries are sometimes transferred from developed to developing countries, where labour and production costs are lower and standards of environmental regulations are looser or less strictly enforced. See B. Castleman, *The Export of Hazardous Factories to Developing Nations* (1978).

<sup>6</sup> See *North-South: a Programme for Survival*, report of the Independent Commission on International Development Issues under the chairmanship of Willy Brandt (London, Pan Books, 1980).

The States members of OECD have attempted to provide for environmental protection in "Guidelines for multinational enterprises", which the OECD Council was to review in 1984. See also OECD, *Economic and Ecological Interdependence* (Paris, 1982), p. 66.

In 1983, the Inter-Governmental Working Group on Transnational Corporations prepared a comprehensive draft code of conduct for transnational corporations. The draft includes a section on environmental protection that provides for measures to avoid and remedy environmental damage, to supply relevant information to developing countries about the potential hazards involved in certain industrial activities, etc. The principles of environmental protection of the code of conduct provide as follows:

"Environmental protection

"44. Transnational corporations, in carrying out their production activities, shall comply with national policies, laws and regulations of the countries in which they operate with regard to preservation of the environment. They shall take steps to improve the environment and make efforts to develop and apply adequate technologies for this purpose.

"45. Transnational corporations shall supply to the authorities of the countries in which they operate all relevant information concerning:

"(a) Features of their products or processes which may harm the environment and the measures and costs required to avoid harmful effects;

"(b) Prohibitions, restrictions, warnings and other regulatory measures imposed in other countries, on grounds of protection of the environment, on products and processes which they have introduced or intend to introduce in the countries concerned.

"46. Transnational corporations shall be responsive to requests from Governments of the countries in which they operate and be prepared where appropriate to co-operate with international organizations in their efforts to develop and promote national and international standards for the protection of the environment." (E/C.10/1983/S/4, pp. 11-12.)

<sup>1</sup> *Yearbook . . . 1983*, vol. II (Part Two), p. 83, para. 286.

<sup>2</sup> It is not the purpose of this study to describe the factual instances of global interdependence. The above brief description is intended merely to indicate the reasons for the choice of materials on State practice.

<sup>3</sup> The "acting State", in this study, refers to the State within whose territorial jurisdiction or under whose control an activity has taken place that has caused or may cause injuries beyond its territorial jurisdiction or control to other States or their nationals.

of State co-operation, evidenced by treaties, in which the parties have agreed on procedures under which certain activities may be conducted. The substance of these agreements reveals certain procedural and substantive principles by which the parties have accommodated their conflicting interests: "good-neighbourliness", "due care", "equitable principles".

6. The materials examined in this study have been selected and analysed on the basis of their relevance to the concepts of good-neighbourliness, due care, equitable principles, prior negotiation and consultation, balance of interests and prevention and minimization of injuries to others in the undertaking of activities within or beyond the territorial jurisdiction or control of States. It is not suggested that every example of State practice examined deals only and directly with acts "not prohibited by international law". Their selection was dictated by their relevance to the topic of liability or by the pertinence of the activities examined, whether or not they were wrongful. It is therefore pertinent to consider the handling of some disputes in which there was no general agreement as to the lawfulness or unlawfulness of the acts or omissions giving rise to injurious consequences; for example, the hydrogen bomb tests in the atmosphere in the 1950s and 1970s generated debate concerning their lawfulness among jurists. Similarly, there was extensive discussion among jurists concerning the lawfulness of the hydrogen bomb tests conducted by the United States of America on the high seas in 1954, although this matter was never submitted for judicial decision.<sup>7</sup> The French nuclear tests gave rise to the same debate. That matter was submitted to the International Court of Justice for a decision, but the judgment was not rendered on the merits of the case.<sup>8</sup>

7. Although certain treaties deal with matters that may be characterized as "wrongful acts", they relate to problems relevant to the topic of international liability and have been included for that reason. These treaties demonstrate the relevance of the concepts of due care, good-neighbourliness, etc., and the forms in which they have been used. A detailed examination of these treaties reveals how a particular activity with potentially injurious impact has been undertaken under some form of supervision, what preventive measures are required in order to avoid or at least to minimize injuries to other international actors, what kind of injuries are involved and at what point they become unacceptable and entail liability and, finally, what are the remedies. Since this is a survey of past trends, treaties have been selected whether or not they are still in force.

8. A large number of bilateral agreements have applied the concepts of good-neighbourliness, due

care, etc., in the utilization of shared rivers. Since most of those agreements were examined by Mr. Schwebel in his third report on the law of the non-navigational uses of international watercourses,<sup>9</sup> only some of them are examined in this study.

9. Judicial decisions of domestic courts, of international courts and of arbitral tribunals involving efforts by third-party decision-makers are relevant for the substantive principles they examine and sometimes for the factors they balance against one another. Documents exchanged between foreign ministries and government officials are important sources of State practice, as are settlements of disputes through non-judicial methods. Although they are not products of conventional judicial procedure, they may represent a pattern in trends regarding substantive issues in dispute. Statements made by the State officials involved as well as the content of the actual settlement of disputes will be examined for their possible relevance to the substantive principles of liability.

10. This study has not ignored the difficulties of evaluating a particular instance as "evidence" of State practice.<sup>10</sup> Different policies may motivate the conclusion of treaties or decisions. Some may be compromises or accommodations for extraneous reasons. But repeated instances of State practice, when they follow and promote similar policies, may create expectations about the authoritativeness of those policies in future behaviour. Even though some of the policies may not have been explicitly stated in connection with the relevant events, or may purposely and explicitly have been left undecided, continuous similar behaviour may lead to the creation of a customary norm. Whether or not the materials examined here are established as customary law, they *demonstrate* a trend in expectations and may contribute to the clarification of policies concerning some detailed principles of the international liability topic. Practice also demonstrates ways in which competing principles, such as "State sovereignty" and "domestic jurisdiction", are to be reconciled with the new norms.

11. In referring to State practice, caution must be exercised in extrapolating principles, for the more general

<sup>9</sup> *Yearbook* . . . 1982, vol. II (Part One), p. 65, document A/CN.4/348.

<sup>10</sup> For example, abstention by States from engaging in activities which, although lawful, may cause injuries beyond their territorial jurisdiction, may or may not be relevant to creating customary behaviour. The Permanent Court of International Justice and its successor, the International Court of Justice, have observed that the mere fact of abstention, without careful consideration of the motivating factors, is insufficient proof of the existence of an international legal custom. Abstention by States from acting in a certain way may have a number of reasons, not all of which have legal significance. See the judgment rendered on 7 September 1927 by the Permanent Court of International Justice in the *Lotus* case (*P.C.I.J.*, Series A, No. 10, p. 28). A similar point was made by the International Court of Justice in its judgment of 20 November 1950 in the *Asylum* case (*I.C.J. Reports* 1950, p. 286), and in its judgment of 20 February 1969 relating to the *North Sea Continental Shelf* cases (*I.C.J. Reports* 1969, p. 44, para. 77). See also C. Parry, *The Sources and Evidences of International Law* (Manchester University Press, 1965), pp. 34-64.

However, in its judgment of 6 April 1955 in the *Nottebohm* case (second phase), the Court relied on State restraint as evidence of the existence of an international norm restricting freedom of action (*I.C.J. Reports* 1955, pp. 21-22).

<sup>7</sup> See e.g. E. Margolis, "The hydrogen bomb experiments and international law", *The Yale Law Journal*, New Haven, Conn., vol. 64, 1955, p. 629; M. S. McDougal and N. A. Schlei, "The hydrogen bomb tests in perspective: lawful measures for security", *ibid.*, p. 648; M. S. McDougal, "The hydrogen bomb tests and the international law of the sea", *The American Journal of International Law*, Washington, D.C., vol. 49, 1955, p. 356; and H. J. Taubenfeld, "Nuclear testing and international law", *Southwestern Law Journal*, Dallas, Tex., vol. 16, p. 365.

<sup>8</sup> *Nuclear Tests (Australia v. France; New Zealand v. France)*, judgments of 20 December 1974, *I.C.J. Reports* 1974, pp. 253 and 457.

expectations about the *degree of tolerance* concerning the injurious impact of activities can vary from activity to activity. For example, the general expectations about appropriate behaviour concerning economic and monetary activities may differ, as far as their extra-territorial injurious impact is concerned, from those regarding experimental or industrial activities, or activities relating to self-defence, self-help, the environment, etc.

12. The materials examined in this study are not, of course, exhaustive. They relate primarily to activities concerning the physical use and management of the environment, for State practice in regulating activities causing injuries to other States has been developed more extensively in this area. The format of the study is also designed to be a useful source material; hence, relevant extracts from treaties, judicial decisions and official correspondence are also cited.

13. The outline of the study has been formulated on the basis of *functional* problems which may appear relevant to the topic of international liability. Since the focus of the topic appears to be on the continuing flow of activities from the stage of initiation to that of completion, the study follows a similar chronological order.

14. Chapter I describes activities which have been regulated for their possible extraterritorial injurious impact in terms of both their nature and their location of origin.

15. Chapter II examines the process of initiation of activities that may entail extraterritorial injurious impact. It points out different stages of this process in which the acting State, prior to undertaking the activity, attempts to assess the impact of the activity on other States and international actors. State practice demonstrates the existence of a rather complex procedure for assessing the impact of activities, such as the collection of data by the acting States about the activities and their possible impact, negotiation with potentially affected (injured) States and the balancing of the interests involved by cor-

relating the benefits of carrying out the activity with its cost, etc.

16. Chapter III examines the procedure by which attempts are made to prevent or at least minimize extra-territorial injuries, and reviews the monitoring system provided in treaties and recommended in State practice. It also points out the types of or recommended changes in activities in order to prevent or minimize their injurious impact. It appears that monitoring systems may involve co-operation among the acting and the injured States, or may be entrusted to an independent non-governmental body, etc.

17. Chapter IV examines the requirements of guarantees for payment of compensation in relation to activities with strong potential extraterritorial injurious impact whose performance has been agreed upon by the acting and the injured States.

18. Chapter V examines the issue of liability for extra-territorial injurious impact. Despite compliance with procedural requirements designed to prevent or minimize damage, injuries may be suffered by other States and their nationals. This chapter examines the issue of liability. It points out that in determining the liability of the acting State a balance is struck between the interests of the parties and those of the larger community. It also examines the extent to which the operator of the activity or the State in whose territory, or under whose control, the activity has taken place, is liable. Chapter V also examines the circumstances that preclude the liability of the acting State.

19. Finally, chapter VI examines the issue of compensation and damages. It reviews the relevant treaty provisions and forms of State practice concerning compensable injuries and other forms of compensation. It points out that some treaties provide limitations on compensation. It examines the authorities recognized in State practice as competent to decide on compensation and reviews the enforceability of judgments awarding compensation.

## CHAPTER I

### **Activities causing injuries beyond the territorial jurisdiction or control of the State where they are conducted**

#### **A. Forms of activities**

20. Activities causing injuries beyond the territorial jurisdiction or control of the acting State vary. They may include use of airspace, nuclear or industrial activities, conservation and utilization of economically important resources, and even communication and broadcasting. Some of these activities may cause more substantial injuries than others, and the injuries may sometimes be devastating. State practice appears to demonstrate no significant relationship between the forms of activities and the substantive or procedural requirements regulating them. However, a relationship exists between the injury or harm those activities may

cause and the substantive and procedural requirements applicable thereto, that is, the rules authorizing or not such activities and the conditions governing their performance. Ensuring compliance with the norms of procedure and observance of the concepts of due care, good-neighbourliness, etc., becomes more complex as the possibility and extent of injury resulting from the activities become more substantial. Activities causing injuries that could be devastating may be *banned* outright. Some nuclear testing may be included in this category, as illustrated by the 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water. Similarly, the emplacement of nuclear weapons and other weapons of mass destruction on the

sea-bed and the ocean floor and in the subsoil thereof,<sup>11</sup> as well as military or any hostile use of environmental modification techniques,<sup>12</sup> have been prohibited by multilateral treaties. The treaties dealing with the two latter activities provide for monitoring or "verification" of compliance with treaty obligations by its signatories. Therefore, regardless of the similarity in the "form" of these three activities and their regulation by treaties, the actual reason for banning them is the extent of their harmful consequences, which has led to a policy decision by their signatories to ban them altogether. Sometimes the extent of injuries may not lead to a total banning of an activity, but to *partial* or *temporary* banning or to substantial revision of the form in which the activity may be carried out, as for instance in the *Trail Smelter* case.

21. At a very *general* level, injuries caused by activities beyond the territorial jurisdiction or control of the acting State may be divided into three categories. The first category covers injuries generally considered minor and expected to be tolerated among States without compensation. The second category is not generally expected to be tolerated, unless with the consent of the injured State, or against payment of compensation. The third category comprises injuries that are devastating and not generally expected to be tolerated at all. State practice shows that it is extremely difficult to identify the *thresholds* separating the three categories of injuries. It may be easier to pinpoint activities leading to the third category of injuries; these activities are normally banned. Treaties banning some of them refer in the preamble to the more general expectations of the community, the promotion of peace and security and other principles of the United Nations Charter. The main difficulties arise in identifying the threshold between the first and second categories of injuries, that is, in identifying the types of activities and the types of injuries concerning which the acting State has to consult the potentially injured State, or take measures to prevent the injury. It appears, so far, that State practice has not dealt with this question categorically and in a single formula. Sometimes it is the nature of the resources being used that is taken as the point of departure, such as shared rivers, the high seas or airspace. At other times, the attempt has been made to determine the expectations shared by the parties. Expectations are embodied in treaties, official correspondence and general relations between States. At the most general level, State practice, both in treaties and in judicial decisions, has referred to the concepts of good-neighbourliness, due care, equitable principles, etc., as guidelines to distinguish activities with tolerable injuries from those resulting from the second category of injuries.

22. It is not only activities that may cause extra-territorial injuries; *inactivity* may also lead to injuries. The 1949 judgment of the International Court of Justice in the *Corfu Channel* case leads to this conclusion. The decision of the German Constitutional Law Court in the

*Donauversinkung* case (1927), involving the States of Württemberg and Prussia versus the State of Baden and regarding their rights in the flow of the waters of the Danube, bears on the question of inactivity. Holding that "Baden must desist from injuring her neighbour", the Court further stated that Baden did "not need to eliminate the natural loss of water that would occur in the storage area even if the dam were not there, but only the augmented seepage caused by the dam". As to the prohibition by the State of Baden of measures to render it possible for the waters of the Danube to flow onwards rather than to run off to the Aach, the Court considered that Baden could not justify it on the grounds that "in this way she is only maintaining the natural conditions with respect to the water", and that while a State "is not obliged to interfere, in the interests of another State, with the natural processes affecting an international river", the action of Baden in that particular case amounted to "the neglect of any orderly work of maintenance" along that stretch of the river. The Court held that the State of Baden was "therefore required to eliminate the increased seepage caused by her inactivity".<sup>13</sup>

#### (a) *Multilateral agreements*

23. Many activities with possible extraterritorial injurious consequences have been regulated by multilateral treaties. They include the use of nuclear materials, industrial activities, disposal of wastes, etc. Multilateral treaties regulating nuclear activities include the 1963 Vienna Convention on Civil Liability for Nuclear Damage, the 1962 Convention on the Liability of Operators of Nuclear Ships, the 1960 Convention on Third Party Liability in the Field of Nuclear Energy and the 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water.

24. The 1952 Convention on Damage caused by Foreign Aircraft to Third Parties on the Surface covers some space activities, while the 1972 Convention on International Liability for Damage caused by Space Objects deals with outer space activities.

25. Some polluting activities are covered by the 1960 Convention concerning the Protection of Lake Constance against Pollution, the 1969 International Convention on Civil Liability for Oil Pollution Damage, the 1973 International Convention for the Prevention of Pollution from Ships and the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter. The 1982 United Nations Convention on the Law of the Sea provides in its article 195 that States "shall act so as not to transfer, directly or indirectly, damage or hazards from one area to another or transform one type of pollution into another". Article 196 of the Convention refers to pollution resulting from the use of technologies or the intentional or accidental introduction of alien or new species in a particular part of the marine environment where they might cause significant and harmful changes.

<sup>11</sup> Treaty of 11 February 1971 on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea-bed and the Ocean Floor and in the Subsoil thereof.

<sup>12</sup> Convention of 10 December 1976 on the Prohibition of Military or any other Hostile Use of Environment Modification Techniques.

<sup>13</sup> *Württemberg and Prussia v. Baden* (1927) (*Entscheidungen des Reichsgerichts in Zivilsachen* (Berlin, 1927), vol. 116, appendix, p. 18; *Annual Digest of Public International Law Cases, 1927-1928* (London, 1931), vol. 4, p. 128, case No. 86). See also G. H. Hackworth, ed., *Digest of International Law* (Washington, D.C., 1940), vol. 1, pp. 596-599.



26. Among the conventions relating to the conservation of economically important fish stocks, the 1966 International Convention for the Conservation of Atlantic Tunas and the 1949 International Convention for the Northwest Atlantic Fisheries may be named.

27. Conventions dealing with communications and broadcasting include the 1927 International Radiotelegraph Convention, with general regulations and additional regulations, the 1932 International Telecommunication Convention and the 1936 International Convention concerning the Use of Broadcasting in the Cause of Peace.

#### (b) *Bilateral agreements*

28. A great number of bilateral agreements relate to the utilization of lakes or rivers shared by the contracting States. Bilateral agreements may also relate to nuclear activities and materials. For example, the 1966 Convention between Belgium and France on radiological protection with regard to the installations of the Ardennes nuclear power station is concerned with radiological protection in connection with the nuclear power plant at Chooz, belonging to the Société d'énergie nucléaire franco-belge des Ardennes, a joint-stock company created by France and Belgium and operating in French territory near the Belgian border. Similarly, the exchange of letters of 16 July 1976 constituting an agreement between France and the USSR concerning the prevention of accidental or unauthorized use of nuclear weapons relates to the use of nuclear materials that may cause injuries to the other contracting party.

29. Bilateral agreements have been concluded to regulate the transport of hazardous substances and the conduct of activities affecting climate and weather. The first matter was the subject of the 1973 Agreement between Norway and the United Kingdom relating to the transmission of petroleum by pipeline from the Ekofisk Field and neighbouring areas to the United Kingdom. A similar agreement was concluded between the Federal Republic of Germany and Norway,<sup>14</sup> while Canada and the United States of America concluded an agreement concerning weather modification activities.<sup>15</sup>

30. Some bilateral agreements deal with *any* activities that may have harmful consequences in the neighbouring State across the border. The most recent agreement of this kind was signed between the United States of America and Mexico on 14 August 1983.<sup>16</sup> The preamble to that Agreement recognizes the importance of a "healthful" environment for the long-term economic and social well-being of present and future generations of each country as well as of the global community. Article 2 of the Agreement provides that the parties shall

adopt appropriate measures to prevent, reduce and eliminate sources of pollution in their own territories which affect the border areas of the other.

31. Some bilateral agreements deal with the use of land close to frontier areas, as for instance the 1973 Agreement between the Federal Republic of Germany and Austria concerning regional planning.

#### (c) *Judicial decisions and State practice other than agreements*

32. State practice in the regulation of pollution caused by industrial activities is evidenced, for example, by the *Trail Smelter* case, by the correspondence between the United States of America and Mexico concerning their dispute relating to the *Peyton Packing Company* and the *Casuco Company*, and the decision rendered in the *Georgia v. Tennessee Copper Company* case (1907).

33. The *Nuclear Tests* case, brought before the International Court of Justice, the claims made against the United States of America following the *Eniwetok Atoll* tests and against the United Kingdom following the *Christmas Island* tests, as well as the Canadian claim against the USSR for damage caused by the Soviet satellite *Cosmos 954*, deal with nuclear activities.

34. Some of the judicial decisions dealing with utilization of international rivers are the *Lake Lanoux* case, the *Société d'énergie électrique du littoral méditerranéen v. Compagnia Imprese Elettriche Ligure* (the *Roya* case) (1939), and the *Missouri v. Illinois* (1906) and *Kansas v. Colorado* (1907) cases.

35. The *Fisheries* case (United Kingdom v. Norway) and the *Fisheries Jurisdiction* cases (United Kingdom v. Iceland; Federal Republic of Germany v. Iceland) deal with fishery activities, whereas the *North Sea Continental Shelf* cases, the 1959 arbitration between *Petroleum Development (Trucial Coast) Ltd.* and the *Sheikh of Abu Dhabi*, and the *Continental Shelf* case (*Tunisia v. Libyan Arab Jamahiriya*) relate to use of the ocean subsoil by the coastal States.

36. Other activities forming the subject matter of State practice that may be cited are the development of power plants (the *Roya* case), counterfeiting (*United States v. Arjona*), and highway construction (diplomatic correspondence between the United States of America and Mexico concerning the *Smugglers* and *Goat Canyons*).

### B. *Location of origin of activities*

37. Activities conducted by the acting State or its nationals with injurious consequences for other States and their nationals may occur within or beyond the territorial jurisdiction or control of the acting State. They may occur in the shared domain, but cause injury to another State or its nationals either in the shared domain or within the territorial jurisdiction or under the control of the injured State. Activities may also occur within the territorial jurisdiction or under the control of the injured State itself. Although the location of activities with injurious impact is relevant, it is not the key factor in regulating them. The location of activities appears to bring into play other relevant and competing in-

<sup>14</sup> Agreement of 16 January 1974 between the Federal Republic of Germany and Norway relating to the transmission of petroleum by pipeline from the Ekofisk Field and neighbouring areas to the Federal Republic of Germany.

<sup>15</sup> Agreement of 26 March 1975 between Canada and the United States of America relating to the exchange of information on weather modification activities.

<sup>16</sup> Agreement of 14 August 1983 between the United States of America and Mexico on co-operation for the protection and improvement of the environment in the border area.

terests and relevant principles of international law; for example, if an activity occurs on the high seas, the interests and rights of the acting State concern the utilization of resources, including the waters of the high seas, and the relevant principle of international law is that of freedom of the high seas. The location of origin of activities may also determine the question of jurisdiction over any possible dispute regarding the consequences of the activities. State practice demonstrates that the key issue in regulating, substantively or procedurally, an activity with injurious consequences is the extent and kind of injury it causes and its impact on the functioning of relations between States, regardless of the location of origin of the activity.

38. The present section is primarily descriptive. It recapitulates the relevant parts of treaties and judicial decisions bearing on activities occurring within or beyond the territorial jurisdiction or control of the acting State, but causing injuries to other States or their nationals.

#### 1. ACTIVITIES CONDUCTED WITHIN THE TERRITORIAL JURISDICTION OR UNDER THE CONTROL OF THE ACTING STATE

39. Most of the activities occurring within the territorial jurisdiction or under the control of one State and causing injuries to neighbouring States relate to the use of resources shared by two or more neighbouring States or to activities close to the frontier.

##### (a) *Multilateral agreements*

40. The 1960 Convention concerning the Protection of Lake Constance against Pollution deals with shared resources. Under article 1, paragraph 2, of the Convention, the riparian States are to take the necessary measures in their respective territories to prevent any increase in the pollution of Lake Constance and, so far as possible, to improve the quality of its waters. To that end, the riparian States are to apply strictly, in respect of Lake Constance and its affluents, all the provisions on water protection that are in force in their territories.

41. The 1974 Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden is a treaty between neighbouring States, but relates to a wider group of activities. Article 1 of the Convention defines "environmentally harmful" activities as being the discharge from the soil or from buildings or installations of solid or liquid waste, gas or any other substance into watercourses, lakes or the sea and the use of land, the sea-bed, buildings or installations in any other way which entails, or may entail, environmental nuisance by water pollution or any other effect on water conditions, sand drift, air pollution, noise, vibration, changes in temperature, radiation, light, etc. The Protocol to the Convention states that discharge from the soil or from buildings or installations of solid or liquid waste, gases or other substances into watercourses, lakes or the sea shall be regarded as environmentally harmful activities *only* if the discharge entails or may entail a nuisance to the surroundings. Therefore the mere discharge of "polluting" substances is *not* sufficient to bring it under the régime of the Convention.

42. Acts covered by the 1960 Convention on Third Party Liability in the Field of Nuclear Energy and the 1963 Vienna Convention on Civil Liability for Nuclear Damage may also be included in the category of activities occurring, most probably, within the territorial jurisdiction or under the control of a State but causing extraterritorial harmful effects. The parties to these conventions, however, are not neighbouring States of a particular region; the conventions are open to all States.

43. The language used in the 1982 United Nations Convention on the Law of the Sea is more ambiguous on the location of origin of activities. Article 195 of the Convention provides that, "in taking measures to prevent, reduce and control pollution of the marine environment", States shall behave in certain ways. Thus the location of origin of polluting activities may be within or beyond the territorial jurisdiction or control of States.

##### (b) *Bilateral agreements*

44. The location of most of the activities regulated by bilateral agreements is within the territorial jurisdiction or under the control of the States parties to these agreements. A number of bilateral agreements relate to the use of a resource shared by two States, such as rivers. In this group of agreements, activities may occur in the section of the shared resource which is within the territorial jurisdiction of either State or within the section of the resource shared by both States. Most bilateral agreements, however, deal with activities occurring within the territorial jurisdiction or under the control of one State. For example, in the 1949 Agreement between Norway and the Soviet Union,<sup>17</sup> the parties agree not to exploit the mineral deposits near their frontiers in a way that may harm their respective territories. Thus they agree, in order to safeguard the frontier line, to have a belt 20 metres wide on either side within which no such activity may take place, unless in exceptional cases and by agreement between the parties. Article 18 of the Agreement provides:

##### *Article 18*

1. Mineral deposits near the frontier line may not be so prospected or worked as to harm the territory of the other Party.

2. In order to safeguard the frontier line, there shall be a belt 20 metres wide on either side thereof in which the work referred to in paragraph 1 of this article shall ordinarily be prohibited and shall be permitted only in exceptional cases by agreement between the competent authorities of the Contracting Parties.

3. If in any particular case it is not expedient to observe the belts referred to in paragraph 2 of this article, the competent authorities of the Contracting Parties shall agree on other measures necessary to safeguard the frontier line.

45. Some bilateral agreements deal with activities occurring within the territorial jurisdiction of the "injured" State. For example, under the 1967 Agreement between the Federal Republic of Germany and Austria,<sup>18</sup> the Federal Republic of Germany agrees to

<sup>17</sup> Agreement of 29 December 1949 between Norway and the USSR concerning the régime of the Norwegian-Soviet frontier and procedure for settlement of frontier disputes and incidents.

<sup>18</sup> Agreement of 19 December 1967 between the Federal Republic of Germany and Austria concerning the effects on the territory of the Federal Republic of Germany of construction and operation of the Salzburg Airport.

establish a safety zone in its own territory for an airport to be established in Salzburg (Austria). Hence, activities that may cause injuries in the territory of the Federal Republic of Germany may be caused in that territory but not necessarily by nationals of that State. The injury may be the result of the operations of the Austrian airport.

46. The passage of nuclear ships to or from foreign ports is the subject of bilateral agreements for the prevention of nuclear or other kinds of damage. These treaties approach the question of territorial jurisdiction or control functionally. Accordingly, they are relevant to nuclear damage occurring within the territory of the host State if the nuclear incident has occurred within that territory. For example, under article 20 of the 1970 Treaty between Liberia and the Federal Republic of Germany,<sup>19</sup> liability under the Treaty shall apply to nuclear damage occurring within Liberian territory or Liberian waters if the nuclear incident has occurred within Liberian territory or Liberian waters. And article VIII of the 1964 Agreement between the United States of America and Italy on the use of Italian ports by the N.S. *Savannah*<sup>20</sup> stipulates that the United States is liable for "any damage to people or goods deriving from a nuclear incident in which the N.S. *Savannah* may be involved within Italian territorial waters". The agreements concluded by the United States of America with Ireland<sup>21</sup> and with the Netherlands<sup>22</sup> contain similar provisions.

(c) *Judicial decisions and State practice other than agreements*

47. Judicial decisions and official correspondence relating to this group of activities stem from conflicts primarily between neighbouring States in relation to the use of resources shared by them, such as rivers and airspace. The sources point to a broad range of activities taking place in the territory of the acting State or under its control which may cause injury to other States and

<sup>19</sup> Treaty of 27 May 1970 between Liberia and the Federal Republic of Germany on the use of Liberian waters and ports by N.S. [nuclear ship] *Otto Hahn*.

<sup>20</sup> Agreement of 23 November 1964 between the United States of America and Italy on the use of Italian ports by the N.S. [nuclear ship] *Savannah*. See also the exchange of notes of 16 December 1965 constituting an agreement between the United States of America and Italy concerning liability during private operation of the N.S. *Savannah*.

<sup>21</sup> Exchange of notes of 18 June 1964 constituting an agreement between the United States of America and Ireland relating to public liability for damage caused by the N.S. *Savannah*. The agreement provides (note I):

"(1) The United States Government shall provide compensation for all loss, damage, death or injury in Ireland (including Irish territorial seas) arising out of or resulting from the operating of N.S. *Savannah* to the extent that the United States Government, the United States Maritime Administration or a person indemnified under the Indemnification Agreement is liable for public liability in respect of such loss, damage, death or injury."

<sup>22</sup> Agreement of 6 February 1963 between the Netherlands and the United States of America on public liability for damage caused by the N.S. *Savannah*, which provides:

"Article 7

"This Agreement relates only to a nuclear incident occurring during a voyage of the N.S. *Savannah* to or from the Netherlands or its presence in Netherlands waters."

See also the Operational Agreement of 20 May 1963 on arrangements for a visit of the N.S. *Savannah* to the Netherlands.

their nationals. For example, the tribunal in the *Lake Lanoux* case stated that pollution of waters, changed chemical composition or temperature of waters, and diminution of the volume of water flow resulting from the use by one State of international waters within its borders could violate the rights of the affected State and give rise to a "duty of care" in carrying out the activity. In even broader language, the tribunal in the *Trail Smelter* case stated that

... no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein.<sup>23</sup>

Even more generally, the International Court of Justice, in its judgment of 19 April 1949 in the *Corfu Channel* case, stated that it was "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States".<sup>24</sup>

48. An activity originating within the territory of the acting State but not relating to the use of resources shared by two neighbouring States is the launching of satellites. For example, in a note addressed to the Soviet Union in January 1979, Canada argued the liability of that country following the crash of a Soviet nuclear-powered satellite, *Cosmos 954*, on Canadian soil.

49. In the *Alabama* case (1872), the United States of America sought compensation for injuries resulting from the building and outfitting, in British ports, of Confederate ships which were permitted to leave those ports in breach of Britain's duty of neutrality.

2. ACTIVITIES CONDUCTED OUTSIDE THE TERRITORIAL JURISDICTION OR CONTROL OF THE ACTING STATE

(a) *Multilateral agreements*

50. A number of multilateral agreements regulate activities occurring beyond the territorial jurisdiction or control of acting States, but causing injuries to other States and their nationals either in the shared domain or within the territorial jurisdiction of the injured State. Several of the treaties cited in this section deal with nuclear materials. Article XIII of the 1962 Convention on the Liability of Operators of Nuclear Ships states that the Convention applies to nuclear damage caused by a nuclear incident occurring in *any part of the world* and involving the nuclear fuel or radioactive products or waste produced in a nuclear ship flying the flag of a contracting State. Thus, according to this broad definition, a damage-causing nuclear incident may occur within or beyond the territorial jurisdiction or control of States. Article XI, paragraph 2, of the 1963 Vienna Convention on Civil Liability for Nuclear Damage, in an attempt to specify the authority competent to decide on the issue of liability, refers to the location of origin of the activity. It states that, where the nuclear incident occurs outside the territory of any contracting party, or where the place of the nuclear incident cannot be determined with certainty, jurisdiction over such actions

<sup>23</sup> United Nations, *Reports of International Arbitral Awards*, vol. III, p. 1965.

<sup>24</sup> *I.C.J. Reports* 1949, p. 22.

shall lie with the courts of the State in which the liable operator is established.

51. The 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and other matter regulates certain aspects of activities relating to the use of the sea on the assumption that such uses, if not regulated, will cause injury to a number of coastal States. Sometimes particular activities, including the use of resources beyond the territorial jurisdiction or control of States, have a noticeable economic impact on other States and their nationals. These activities have also been regulated by multilateral conventions. For example, the exploitation of certain resources of the sea may fall into this category. Some of the conventions dealing with the exploitation of sea resources bear on the conservation of certain fishery resources which have strong economic implications. Thus they differ from conventions relating to general conservation; they deal with resources that affect the interests of coastal States in a much more *quantitative, tangible, immediate and economic* form. In the preamble to the 1966 International Convention for the Conservation of Atlantic Tunas, the parties explicitly recognize their "mutual interest" in the populations of tuna and tuna-like fish found in the Atlantic Ocean, and in maintaining those populations at levels that will permit the maximum sustainable catch for nutritional and other purposes. Similarly, in the preamble to the 1949 International Convention for the Northwest Atlantic Fisheries, the parties explicitly recognize their shared interest in the conservation of the fishery resources of the north-west Atlantic Ocean.

52. The 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties provides in article I that parties to the Convention may take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastlines or related interests from pollution or threat of pollution of the sea by oil, following upon a maritime casualty. Such incidents on the high seas nearly always cause injuries to at least the flag State. Article VI of the Convention provides that, if the measures taken by the coastal State go beyond what is necessary to prevent the injury, that State shall be obliged to pay compensation to the extent of the damage caused by measures exceeding those that are reasonably necessary. In considering whether the measures are proportionate to the damage, article V provides that account shall be taken of: (a) the extent and probability of imminent damage if those measures are not taken; (b) the likelihood of those measures being

effective; (c) the extent of the damage that may be caused by such measures. Hence any party which takes measures in contravention of these requirements and causes damage to others shall be obliged to pay compensation. Article 1 of the 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water prohibits nuclear explosions *at any place* if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted. In that connection, the 1971 Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-bed and the Ocean Floor and in the Subsoil thereof should also be mentioned. The 1976 Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques deals with techniques of this type which might occur either within or beyond the territorial jurisdiction or control of the acting State.

#### (b) *Bilateral agreements*

53. In agreements regarding the use of foreign ports by nuclear ships, the State whose nuclear ship is visiting the foreign ports has accepted liability for injuries its ships may cause outside the territory of the host State during a passage to or from its port if the damage is caused to the host State or to ships of the host State registry.<sup>25</sup>

#### (c) *Judicial decisions and State practice other than agreements*

54. Although almost all the judicial decisions and official correspondence dealing with questions of extra-territorial injuries surveyed in this study relate to activities occurring within the territorial jurisdiction or under the control of a State, at least one decision bears on activities occurring in the shared domain. In the *Fisheries Jurisdiction* cases,<sup>26</sup> the United Kingdom and the Federal Republic of Germany objected to the unilateral expansion of the fishery zone by Iceland, which, they claimed, had been extended to the high seas.

<sup>25</sup> See e.g. the Treaty of 27 May 1970 between Liberia and the Federal Republic of Germany, which provides, in article 20, that the Federal Republic of Germany shall be liable for injuries its nuclear ship may cause "outside Liberian territory or Liberian waters during a passage to or from a Liberian port or to or from Liberian waters". See also footnotes 20 and 22 above and the similar agreements concluded by the United States of America with Italy and the Netherlands concerning the N.S. *Savannah*.

<sup>26</sup> *I.C.J. Reports* 1974, pp. 3 and 175.

## CHAPTER II

### Assessment of activities for their injurious impact

55. The "assessment of activities for their injurious impact" referred to in this study involves a continuous process that begins prior to, but may continue during the performance of activities with potentially injurious impact in order to prevent or minimize injuries to other

States and their nationals. Such assessment comprises different stages in which a variety of interests are evaluated and accommodated, and choices and changes made. Although the expression "assessment of activities" is used in this study, the content and conduct of the process are to be found under other headings in

many treaties, judicial decisions and official correspondence between States, although not always systematically and step by step. The unsystematic references to the procedures and stages of the assessment of activities in treaties or judicial decisions are primarily determined by the main purposes of the treaty or by the questions posed for judicial decision. Sometimes one or more aspects of assessment procedures may be irrelevant to a particular activity. For example, in the case of the prohibition of emplacement of nuclear weapons on the high seas, or of the hostile use of environmental modification techniques, assessment procedures such as collection of data, exchange of information and consultation, etc. are totally irrelevant. The only stage of assessment that may be relevant and is stipulated in the two treaties dealing with these two activities is that of monitoring. Sometimes the procedural requirements for assessing activities for their injurious impact prior to or during their undertaking have been eliminated in agreements. States have made a policy decision that the performance of these activities is essential regardless of their harmful impact, as is apparent from most treaties dealing with shipping. The basic thrust of these treaties is to determine liability and to provide compensation for injuries these activities may cause.

#### (a) *Multilateral agreements*

56. The requirement that States assess the injurious impact of their activities is reflected in article 192 of the 1982 United Nations Convention on the Law of the Sea, which provides: "States have the obligation to protect and preserve the marine environment." The language of article 194, paragraph 2, is more explicit. It requires States to take "all measures" necessary to prevent damage resulting from activities under their jurisdiction or control to other States and their environment:

#### *Article 194. Measures to prevent, reduce and control pollution of the marine environment*

...  
2. States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.

57. With regard to activities concerning resource deposits in the Area which extend beyond the limits of national jurisdiction, article 142 of the Convention requires that the acting State, when exploiting the deposits, take due account of the rights and interests of the coastal State. Paragraph 1 of this article reads:

#### *Article 142. Rights and legitimate interests of coastal States*

1. Activities in the Area, with respect to resource deposits in the Area which lie across limits of national jurisdiction, shall be conducted with due regard to the rights and legitimate interests of any coastal State\* across whose jurisdiction such deposits lie.  
...

Moreover, part XII of the Convention elaborates on the requirement of assessing the injurious impact of activities. Sections 1 to 4 of part XII in particular deal primarily with the detailed steps of impact assessment as set forth in this study.

58. Two multilateral treaties regarding communications systems require their signatories to use their communications installations in ways that will not interfere with the facilities of other States parties. Article 10, paragraph 2, of the 1927 International Radiotelegraph Convention requires the parties to the Convention to operate stations in such a manner as not to interfere with the radioelectric communications of other contracting States or of persons authorized by those Governments:

#### *Article 10. Conditions to be observed by stations. Interference*

...  
2. All stations, whatever their object may be, must, so far as possible, be established and operated in such manner as not to interfere with the radioelectric communications or services of other contracting Governments and of individual persons or private enterprises authorized by those contracting Governments to conduct a public radiocommunication service.

59. The 1932 International Telecommunication Convention contains a similar requirement:

#### *Article 35. Interference*

1. All stations, whatever their object may be, must, so far as possible, be established and operated in such manner as not to interfere with the radioelectric communications or services of other Contracting Governments, or of private enterprises recognized by those Contracting Governments or other duly authorized enterprises which conduct a radiocommunication service.

2. Each of the Contracting Governments not itself operating systems of radiocommunication undertakes to require private enterprises which it recognizes and other enterprises duly authorized for that purpose to observe the provisions of paragraph 1 above.

Again, the 1936 International Convention concerning the Use of Broadcasting in the Cause of Peace prohibits the broadcasting to another State of material designed to incite the population to act in a manner incompatible with the internal order and security of that State. It provides:

#### *Article 1*

The High Contracting Parties mutually undertake to prohibit and, if occasion arises, to stop without delay the broadcasting within their respective territories of any transmission which to the detriment of good international understanding is of such a character as to incite the population of any territory to acts incompatible with the internal order or the security of a territory of a High Contracting Party.

60. Article 12 of the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region requires the contracting parties to develop technical and other guidelines to assist them in assessing the environmental impact of their development projects upon the area covered by the Convention. The assessment should bear in particular on the effects of those projects upon coastal areas. Under this article, each contracting State shall, when requested, submit information concerning its development programme and the potential consequences thereof. Where appropriate, a State may engage in consultations with other contracting States which may be affected by the impact of its activities. This article reads:

#### *Article 12. Environmental impact assessment*

1. As part of their environmental management policies the Contracting Parties undertake to develop technical and other guidelines to assist the planning of their major development projects in such a way as to prevent or minimize harmful impacts on the Convention area.

2. Each Contracting Party shall assess within its capabilities, or ensure the assessment of, the potential effects of such projects on the marine environment, particularly in coastal areas, so that appropriate measures may be taken to prevent any substantial pollution of, or significant and harmful changes to, the Convention area.

3. With respect to the assessments referred to in paragraph 2, each Contracting Party shall, with the assistance of the Organization when requested, develop procedures for the dissemination of information and may, where appropriate, invite other Contracting Parties which may be affected to consult with it and to submit comments.

#### (b) *Bilateral agreements*

61. Since bilateral agreements are primarily directed to the specific use of a particular resource, their provisions, including those relating to impact assessment, also appear to be more specific. For example, they may simply *prohibit certain specific activities*. Nevertheless, these provisions are designed to protect the interests of both parties in *security, economic or social* matters. Thus article 3 of the 1922 Convention between Finland and the RSFSR<sup>27</sup> prohibits the diversion of certain watercourses, the erection of constructions or the adoption of measures that might affect the flow of water by altering the existing depth or condition of the parts of the watercourse situated in the territory of the other contracting State, thereby damaging the fairway or encroaching upon channels used for navigation or timber-floating, except by special agreement between the contracting States. This article does not prohibit certain activities, *but specific results irrespective of the activities themselves*.

62. Occasionally, the provisions relating to impact assessment may be more *general*, not relating to any specific activity or outcome. Thus, under article 28, paragraph 1, of the 1963 Treaty between Hungary and Romania,<sup>28</sup> the contracting parties are required to undertake forestry activities in the vicinity of their frontiers in such a way as not to impair the forest economy of the other party:

#### *Article 28*

1. Each Contracting Party shall so conduct its forestry operations in the vicinity of the frontier as not to impair the forest economy of the other Party.

...

Again, article 1 of the 1973 Agreement between the Federal Republic of Germany and Austria<sup>29</sup> establishes a German-Austrian Land Use Commission to facilitate co-operation in matters of land use, particularly in areas adjacent to their common frontier:

#### *Article 1*

With a view to furthering and facilitating co-operation in matters of land use, particularly as regards areas adjacent to the common frontier, there shall be established a German-Austrian Land Use Commission (hereinafter referred to as "the Commission").

<sup>27</sup> Convention of 28 October 1922 between Finland and the Russian Socialist Federal Soviet Republic concerning the maintenance of river channels and the regulation of fishing on watercourses forming part of the frontier between Finland and Russia.

<sup>28</sup> Treaty of 13 June 1963 between Hungary and Romania concerning the régime of the Hungarian-Romanian State frontier and co-operation in frontier matters.

<sup>29</sup> Agreement of 11 December 1973 between the Federal Republic of Germany and Austria concerning co-operation with respect to land use.

Such co-operation would obviously entail consultation between the parties or through the Commission regarding land use in the frontier areas.

63. Sometimes the entire bilateral agreement may focus on the assessment of the impact of *any activity* that has transboundary effects. The 1983 Agreement between Mexico and the United States of America<sup>30</sup> may be cited as an example. In addition to the provisions of the preamble referred to above (para. 30), article 1 of the Agreement provides that co-operation among the parties shall be based on *equality, reciprocity and mutual benefit*:

#### *Article 1*

The United States of America and the United Mexican States, hereinafter referred to as the Parties, agree to co-operate in the field of environmental protection in the border area on the basis of equality, reciprocity and mutual benefit. The objectives of the present Agreement are to establish the basis for co-operation between the Parties for the protection, improvement and conservation of the environment and the problems which affect it, as well as to agree on necessary measures to prevent and control pollution in the border area, and to provide the framework for development of a system of notification for emergency situations. Such objectives shall be pursued without prejudice to the co-operation which the Parties may agree to undertake outside the border area.

64. Bilateral agreements have also been concluded for the safeguard of frontier lines and the protection of the security interests of the parties. For example, article 18 of the 1949 Agreement between Norway and the Soviet Union requires the parties to maintain a belt 20 metres wide on either side of their frontier within which no activity for exploitation of mineral deposits may take place unless by agreement between the two States (see para. 44 above).

#### (c) *Judicial decisions and State practice other than agreements*

65. The general requirement that States must assess the injurious impact of activities undertaken by them or by persons under their control was stated in the *Trail Smelter* case. The tribunal observed that "no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein" (see para. 47 above). The tribunal established a rather precise and comprehensive régime, which included assessment of the injurious impact of smelting activities occurring within the acting State but causing extra-territorial injuries.

66. A more exacting requirement of State assessment of activities conducted under a State's territorial control was laid down in the judgment of 9 April 1949 of the International Court of Justice in the *Corfu Channel* case (*merits*). In that case, the United Kingdom sought indemnity for damage to one of its ships which had struck a mine in the Corfu Channel. The author of the mine-laying remained unknown. None the less, the Court found that Albania was responsible for the damage occurring within its territorial waters:

From all the facts and observations mentioned above, the Court draws the conclusion that the laying of the minefield which caused the explosions on October 22nd, 1946, could not have been accomplished without the knowledge of the Albanian Government.

<sup>30</sup> See footnote 16 above.

The obligations resulting from this knowledge are not disputed between the Parties.\* Counsel for the Albanian Government expressly recognized that “if Albania had been informed of the operation before the incidents of October 22nd, and in time to warn the British vessels and shipping in general of the existence of mines in the Corfu Channel, her responsibility would be involved . . .”.

The obligations incumbent upon the Albanian authorities consisted in notifying, for the benefit of shipping in general, the existence of a minefield in Albanian territorial waters and in warning the approaching British warships of the imminent danger to which the minefield exposed them. Such obligations are based, not on the Hague Convention of 1907, No. VIII, which is applicable in time of war, but on certain general and well-recognized principles, namely: elementary considerations of humanity, even more exacting in peace than in war: *the principle of the freedom of maritime communication; and every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States.*<sup>31</sup>

67. From the language of the judgment it appears that the standard of “due care” which a State must maintain as regards activities by other international actors on its territory is *at least* that of *non-negligence* in the assessment of injurious impact:

It is clear that knowledge of the minelaying cannot be imputed to the Albanian Government by reason merely of the fact that a minefield discovered in Albanian territorial waters caused the explosions of which the British warships were the victims. It is true, as international practice shows, that a State on whose territory or in whose waters an act contrary to international law has occurred, may be called upon to give an explanation. It is also true that a State *cannot evade such a request by limiting itself to a reply that it is ignorant of the circumstances of the act and of its authors.*\* The State may, up to a certain point, be bound to supply particulars of the use made by it of the means of information and inquiry at its disposal. . . .<sup>32</sup>

68. The Court recognized that, from the mere fact of the control exercised by a State over its territory and waters, it could not be concluded that that State had known or ought to have known of any wrongdoing perpetrated therein. That fact, the Court concluded, by itself and apart from other circumstances, did not *prima facie* involve responsibility, nor did it shift the burden of proof. On the other hand, the Court recognized that the exclusive control by a State over its territory had a bearing upon the *methods of proof* available to establish the knowledge by the State of such events. By reason of this *exclusive control*, the injured State was often unable to furnish direct proof of facts giving rise to responsibility. The injured State should therefore be allowed “a more liberal recourse to inferences of fact and circumstantial evidence”.<sup>33</sup> According to the Court, this form of evidence was admitted in all systems of law and was recognized by international law. It should further be regarded “as of special weight when it is based on a series of facts linked together and leading logically to a single conclusion”.<sup>34</sup> Recourse to a *very liberal interpretation and acceptance of evidence* regarding the knowledge by the State of injurious acts carried out by other entities appears to have been recognized.

#### A. Data collection

69. Collecting data on the possible effect of activities with potentially injurious consequences is the first step

in the impact assessment process. It requires serious consideration, in good faith, of the interests of others. This early stage of assessment includes gathering scientific information about the kind and extent of injuries which an activity may cause to other States or their nationals. Collection of data may be undertaken by the acting State alone, by a joint commission or by a group of States. Thus collection of data may be required with respect to the impact of activities on shared domains, and to the level of possible injuries to other States and their nationals.

#### (a) Multilateral agreements

70. Some multilateral agreements provide that the data may be collected by States individually. Article XI of the 1978 Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution explicitly requires States to assess the potential injuries to the marine environment that any of their activities undertaken within their territory may cause:

##### Article XI. Environmental assessment

(a) Each Contracting State shall endeavour to include an *assessment*\* of the potential environmental effects in *any*\* planning activity\* entailing projects within its territory, particularly in the coastal areas, which may cause significant risks of pollution in the Sea Area;

(b) The Contracting States may, in consultation with the secretariat, develop procedures for dissemination of information of the assessment of the activities referred to in paragraph (a) above;

(c) The Contracting States undertake to develop, individually or jointly, technical and other guidelines in accordance with standard scientific practice to assist the planning of their development projects in such a way as to minimize their harmful impact on the marine environment. In this regard international standards may be used where appropriate.

This article does not seem to be concerned about injuries to a specific State, but rather about injuries to a designated area in the Gulf waters (sea area) shared by the contracting States.

71. The 1979 Convention on Long-range Transboundary Air Pollution provides for research and exchange of information and an examination of the impact of activities undertaken by the parties to the Convention. This Convention is primarily concerned with the *prevention* and *minimizing* of injury; it is not concerned with the question of liability. Articles 3 and 4 of the Convention provide:

##### Article 3

The Contracting Parties, within the framework of the present Convention, shall by means of exchanges of information, consultation, research and monitoring, develop without undue delay policies and strategies which shall serve as a means of combating the discharge of air pollutants, taking into account efforts already made at national and international levels.

##### Article 4

The Contracting Parties shall exchange information on and review their policies, scientific activities and technical measures aimed at combating, as far as possible, the discharge of air pollutants which may have adverse effects, thereby contributing to the reduction of air pollution including long-range transboundary air pollution.

Article 7 of the Convention deals with co-operation among member States in research and development of methods for reducing air pollution and its long-range transmission:

<sup>31</sup> *I.C.J. Reports 1949*, p. 22.

<sup>32</sup> *Ibid.*, p. 18.

<sup>33</sup> *Ibid.*

<sup>34</sup> *Ibid.*



### Article 7

The Contracting Parties, as appropriate to their needs, shall initiate and co-operate in the conduct of research into and/or development of:

- (a) existing and proposed technologies for reducing emissions of sulphur compounds and other major air pollutants, including technical and economic feasibility, and environmental consequences;
- (b) instrumentation and other techniques for monitoring and measuring emission rates and ambient concentrations of air pollutants;
- (c) improved models for a better understanding of the transmission of long-range transboundary air pollutants;
- (d) the effects of sulphur compounds and other major air pollutants on human health and the environment, including agriculture, forestry, materials, aquatic and other natural ecosystems and visibility, with a view to establishing a scientific basis for dose/effect relationships designed to protect the environment;
- (e) the economic, social and environmental assessment of alternative measures for attaining environmental objectives including the reduction of long-range transboundary air pollution;
- (f) education and training programmes related to the environmental aspects of pollution by sulphur compounds and other major air pollutants.

Under article 8 of the Convention, the parties are required to exchange data and information on emissions of pollutants at agreed intervals, on major changes in national policies and in industrial development, with their potential impact, and on meteorological and physico-chemical factors:

### Article 8

The Contracting Parties, within the framework of the Executive Body referred to in article 10 and bilaterally, shall, in their common interests, exchange available information on:

- (a) data on emissions at periods of time to be agreed upon, of agreed air pollutants, starting with sulphur dioxide, coming from grid-units of agreed size; or on the fluxes of agreed air pollutants, starting with sulphur dioxide, across national borders, at distances and at periods of time to be agreed upon;
- (b) major changes in national policies and in general industrial development, and their potential impact, which would be likely to cause significant changes in long-range transboundary air pollution;
- (c) control technologies for reducing air pollution relevant to long-range transboundary air pollution;
- (d) the projected cost of the emission control of sulphur compounds and other major air pollutants on a national scale;
- (e) meteorological and physico-chemical data relating to the processes during transmission;
- (f) physico-chemical and biological data relating to the effects of long-range transboundary air pollution and the extent of the damage\* which these data indicate can be attributed to long-range transboundary air pollution;
- (g) national, subregional and regional policies and strategies for the control of sulphur compounds and other major air pollutants.

\* The present Convention does not contain a rule on State liability for damage.

Subparagraphs (e), (f), (g) and (h) of article 9 of the Convention again deal with data collection and exchange of information:

- (e) the need to exchange data on emissions at periods of time to be agreed upon, of agreed air pollutants, starting with sulphur dioxide, coming from grid-units of agreed size; or on the fluxes of agreed air pollutants, starting with sulphur dioxide, across national borders, at distances and at periods of time to be agreed upon. The method, including the model, used to determine the fluxes, as well as the method, including the model, used to determine the transmission of air pollutants based on the emissions per grid-unit, shall be made available and periodically reviewed, in order to improve the methods and the models;

- (f) their willingness to continue the exchange and periodic updating of national data on total emissions of agreed air pollutants, starting with sulphur dioxide;

- (g) the need to provide meteorological and physico-chemical data relating to processes during transmission;

- (h) the need to monitor chemical components in other media such as water, soil and vegetation, as well as a similar monitoring programme to record effects on health and environment.

72. Some multilateral agreements have established commissions designed, among other things, to carry out research and collect data. Thus article III of the 1966 International Convention for the Conservation of Atlantic Tunas establishes a Commission whose duties include the study of the effect of human and natural factors on the abundance of tuna and tuna-like fish in the areas covered by the Convention. In undertaking such a study, the Commission is not obliged to use only information supplied by member States; it may conduct its independent research studies and use the research conducted by and the services of private organizations or individuals. Article IV of the Convention, defining the functions of the Commission, reads:

### Article IV

1. In order to carry out the objectives of this Convention the Commission shall be responsible for the study of the populations of tuna and tuna-like fishes (the Scombriformes with the exception of the families Trichiuridae and Gempylidae and the genus *Scomber*) and such other species of fishes exploited in tuna fishing in the Convention area as are not under investigation by another international fishery organization. Such study shall include research on the abundance, biometry and ecology of the fishes; the oceanography of their environment; and the effects of natural and human factors upon their abundance. The Commission, in carrying out these responsibilities shall, insofar as feasible, utilize the technical and scientific services of, and information from, official agencies of the Contracting Parties and their political subdivisions and may, when desirable, utilize the available services and information of any public or private institution, organization or individual, and may undertake within the limits of its budget independent research to supplement the research work being done by governments, national institutions or other international organizations.

2. The carrying out of the provisions in paragraph 1 of this article shall include:

- (a) collecting and analysing statistical information relating to the current conditions and trends of the tuna fishery resources of the Convention area;
- (b) studying and appraising information concerning measures and methods to ensure maintenance of the populations of tuna and tuna-like fishes in the Convention area at levels which will permit the maximum sustainable catch and which will ensure the effective exploitation of these fishes in a manner consistent with this catch;
- (c) recommending studies and investigations to the Contracting Parties;
- (d) publishing and otherwise disseminating reports of its findings and statistical, biological and other scientific information relative to the tuna fisheries of the Convention area.

Similar responsibilities were envisaged for the Commission established under the 1949 International Convention for the Northwest Atlantic Fisheries. Article VI of the Convention reads:

### Article VI

1. The Commission shall be responsible in the field of scientific investigation for obtaining and collating the information necessary for maintaining those stocks of fish which support international fisheries in the Convention area and the Commission may, through or in collaboration with agencies of the Contracting Governments or other public or private agencies and organizations or, when necessary, independently:



(a) make such investigations as it finds necessary into the abundance, life history and ecology of any species of aquatic life in any part of the Northwest Atlantic Ocean;

(b) collect and analyse statistical information relating to the current conditions and trends of the fishery resources of the Northwest Atlantic Ocean;

(c) study and appraise information concerning the methods for maintaining and increasing stocks of fish in the Northwest Atlantic Ocean;

(d) hold or arrange such hearings as may be useful or essential in connection with the development of complete factual information necessary to carry out the provisions of this Convention;

(e) conduct fishing operations in the Convention area at any time for purposes of scientific investigation;

(f) publish and otherwise disseminate reports of its findings and statistical, scientific and other information relating to the fisheries of the Northwest Atlantic Ocean as well as such other reports as fall within the scope of this Convention.

2. Upon the unanimous recommendation of each Panel affected, the Commission may alter the boundaries of the sub-areas set out in the annex. Any such alteration shall forthwith be reported to the Depositary Government which shall inform the Contracting Governments, and the sub-areas defined in the annex shall be altered accordingly.

3. The Contracting Governments shall furnish to the Commission, at such time and in such form as may be required by the Commission, the statistical information referred to in paragraph 1 (b) of this article.

73. These two fisheries conventions deal primarily with the assessment of the activities of their signatories which might affect the utilization of fishing resources of a certain area of the shared domain. These resources, although in the shared domain, are economically important to the parties to the conventions. Hence the States voluntarily limit their unilateral activities within that domain. The extent of their co-operation under the two conventions is limited to assessment and monitoring. Compliance with these regulations appears to be voluntary. Nevertheless, the conventions and compliance by their signatories with the recommendations of the commissions have created certain expectations concerning the *regulatory* nature of such recommendations.

74. The 1960 Convention on the Protection of Lake Constance against Pollution establishes a Commission with the responsibility of carrying out research to determine the quality of the waters of the lake and the causes of pollution. Article 4 of the Convention reads:

*Article 4*

The Commission shall:

(a) determine the condition of Lake Constance and the causes of its pollution;

(b) regularly verify the quality of the waters of Lake Constance;

(c) discuss measures for remedying existing pollution and preventing all future pollution of Lake Constance and recommend them to the riparian States;

(d) discuss measures which any riparian State proposes to take in accordance with article 1, paragraph 3, above;

(e) study the possibility of instituting regulations to preserve Lake Constance from pollution; consider the possible content of such regulations which shall, if appropriate, form the subject of another convention between the riparian States;

(f) concern itself with all other questions relating to control of pollution of Lake Constance.

The joint technical sub-committee established by the Tripartite Standing Committee on Polluted Waters created under the 1950 Protocol adopted by France, Belgium and Luxembourg, in addition to defining

polluting factors (industrial or commercial origin, degrees of intensity, etc.), is required to collect any appropriate technical opinions concerning the pollution.

75. Articles 200 and 201 of the 1982 United Nations Convention on the Law of the Sea provide that States shall undertake research and studies individually or collectively through competent international organizations to assess the nature and extent of pollution of the marine environment. The area covered for the purposes of such research and studies is referred to as the "marine environment". The purpose of research and study is to assist States in reaching agreement on the formulation of certain rules, standards and recommended practices which would affect the utilization of the shared domain by the contracting States. Articles 200 and 201 read:

*Article 200. Studies, research programmes and exchange of information and data*

States shall co-operate, directly or through competent international organizations, for the purpose of promoting studies, undertaking programmes of scientific research and encouraging the exchange of information and data acquired about pollution of the marine environment. They shall endeavour to participate actively in regional and global programmes to acquire knowledge for the assessment of the nature and extent of pollution, exposure to it, and its pathways, risks and remedies.

*Article 201. Scientific criteria and regulations*

In the light of the information and data acquired pursuant to article 200, States shall co-operate, directly or through competent international organizations, in establishing appropriate scientific criteria for the formulation and elaboration of rules, standards and recommended practices and procedures for the prevention, reduction and control of pollution of the marine environment.

*(b) Bilateral agreements*

76. In a number of multilateral agreements, the collection and exchange of information relate to a broad range of activities. By contrast, bilateral agreements, owing to the greater precision of their subject matter, generally require the collection and exchange of information concerning more specific types of activities using particular resources with certain results. In bilateral agreements concerning shared resources, for example, these requirements relate only to the use of the shared waters. The 1909 Treaty relating to the boundary waters between the United States of America and Canada<sup>33</sup> appears, in article III, to require an assessment of any activity in the *boundary waters* that might be undertaken either by the United States or by Canada within their respective jurisdictions to ensure that such activities "do not materially affect the level or flow of the boundary waters on the other, nor are such provisions intended to interfere with the ordinary use of such waters for domestic and sanitary purposes". Thus, before undertaking any activity, one party should assess the impact of its conduct on the other. Such an assessment requires the collection and study of data and information concerning the injurious impact of the projects to be undertaken.

<sup>33</sup> Treaty of 11 January 1909 between Great Britain and the United States of America relating to boundary waters and boundary questions concerning the boundary between Canada and the United States.

77. Norway and Sweden agreed in the 1929 Convention<sup>36</sup> relating to their shared watercourses that each State might ask the other's competent authorities for the information necessary to enable it to determine the effects a particular undertaking might have in the other's territory. Article 16 of the Convention reads:

#### REQUESTS FOR INFORMATION

##### Article 16

Each State may ask the competent authority in the other country for the information necessary to enable it to determine what effects the undertaking will produce in the former country.

Accordingly, information may be provided on the basis of the request of the potentially injured State.

78. Not all bilateral agreements deal with specific activities. The 1983 Agreement between the United States of America and Mexico<sup>37</sup> provides in article 7 that the parties shall assess, in accordance with their national laws, regulations and policies, the projects that may have *significant* impact on the environment of the border area. Article 6 of the Agreement enumerates, among the forms of co-operation among the parties, "impact assessment" and "periodic exchanges of information and data" on the likely sources of pollution in their respective territories. Articles 6 and 7 of the Agreement read:

##### Article 6

To implement this Agreement, the Parties shall consider and, as appropriate, pursue in a co-ordinated manner practical, legal, institutional and technical measures for protecting the quality of the environment in the border area. Forms of co-operation may include: co-ordination of national programmes; scientific and educational exchanges; environmental monitoring; environmental impact assessment; and periodic exchanges of information and data on likely sources of pollution in their respective territory which may produce environmentally polluting incidents, as defined in an annex to this Agreement.

##### Article 7

The Parties shall assess, as appropriate, in accordance with their respective national laws, regulations and policies, projects that may have significant impacts on the environment of the border area, so that appropriate measures may be considered to avoid or mitigate adverse environmental effects.

To co-ordinate this process, each party is required, under article 8 of the Agreement, to designate a national co-ordinator with the principal function of co-ordinating and monitoring the implementation of the Agreement and making recommendations to the parties. In respect of matters to be examined jointly, the national co-ordinators may invite representatives of federal, State and municipal governments to participate in meetings. By mutual agreement, they may also invite representatives of international governmental or non-governmental organizations which may be able to contribute information on the problems. Articles 8 and 9 of the Agreement read:

##### Article 8

Each Party designates a national co-ordinator whose principal functions will be to co-ordinate and monitor implementation of this Agreement, make recommendations to the Parties, and organize the annual meetings referred to in article 10, and the meetings of the experts

referred to in article 11. Additional responsibilities of the national co-ordinators may be agreed to in an annex to this Agreement.

In the case of the United States of America the national co-ordinator shall be the Environmental Protection Agency, and in the case of Mexico it shall be the Secretaría de Desarrollo Urbano y Ecología, through the Subsecretaría de Ecología.

##### Article 9

Taking into account the subjects to be examined jointly, the national co-ordinators may invite, as appropriate, representatives of federal, State and municipal governments to participate in the meetings provided for in this Agreement. By mutual agreement they may also invite representatives of international governmental or non-governmental organizations who may be able to contribute some element of expertise on problems to be solved.

The national co-ordinators will determine by mutual agreement the form and manner of participation of non-governmental entities.

Each contracting party is required, under this Agreement, to facilitate the entry of the equipment and personnel needed for the implementation of the Agreement (presumably in order to gather information and study likely sources of pollution), subject to the laws and regulations of the receiving State. Article 15 reads:

##### Article 15

The parties shall facilitate the entry of equipment and personnel related to this Agreement, subject to the laws and regulations of the receiving country.

...

However, all technical information obtained under the Agreement shall be available to both parties and to third parties by mutual agreement of the contracting States. Article 16 reads:

##### Article 16

All technical information obtained through the implementation of this Agreement will be available to both parties. Such information may be made available to third parties by the mutual agreement of the parties to this Agreement.

79. Some bilateral agreements provide that a *joint commission* shall supply information concerning the use of a resource shared by the parties. Article 1 of the 1959 Agreement between Yugoslavia and Greece<sup>38</sup> establishes a Permanent Yugoslav-Greek Hydro-economic Commission to study the hydro-economic problems and projects jointly submitted to it by the parties:

##### Article 1

A Permanent Yugoslav-Greek Hydro-economic Commission shall be established to study the hydro-economic problems and projects jointly submitted to it by the Contracting Parties.

The functions of the Commission shall, *inter alia*, include co-operation in the study of problems relating to the Vardar (Axius) River with a view to the future regulation of watercourses in the basin of that river, the regulation of streams in the border area, improvement schemes, hydro-economic problems concerning Lake Doiran and Lake Prespa, fishing in those two lakes, the exchange of hydro-meteorological data, and any other hydro-economic problems which may arise and which may be jointly referred to the permanent Commission by the Contracting States.

The composition, functions and procedure of the Permanent Yugoslav-Greek Hydro-economic Commission shall be as laid down in the regulations annexed to this Agreement and forming an integral part thereof.

80. Occasionally, the arrangements in bilateral agreements for the exchange of information aim at *averting a danger* to a State. The danger may be caused by *natural phenomena* in the territory of another State.

<sup>36</sup> Convention of 11 May 1929 between Norway and Sweden on certain questions relating to the law on watercourses.

<sup>37</sup> See footnote 16 above.

<sup>38</sup> Agreement of 18 June 1959 between Yugoslavia and Greece concerning hydro-economic questions.

Under article 19 of the 1948 Agreement between Poland and the Soviet Union concerning their frontier area,<sup>39</sup> the parties agree that their competent authorities shall exchange information concerning the level and volume of water and ice conditions in frontier waters if such information may help to avert the dangers created by floods or floating ice:

#### Article 19

1. The competent authorities of the Contracting Parties shall exchange information concerning the level and volume of water and ice conditions on frontier waters, if such information may help to avert the dangers created by floods or floating ice. If necessary, the said authorities shall also agree upon a regular system of signals in times of flood or floating ice. Delays in communicating or failure to communicate such information may not constitute grounds for claiming compensation in respect of damage caused by flood or floating ice.

81. It should be noted that, according to the above article, delays or failure to communicate such information *may not* constitute grounds for claiming compensation in respect of damage by flood or floating ice. An identical provision is included in article 19 of the 1950 Treaty between Hungary and the Soviet Union:<sup>40</sup>

#### Article 19

The competent authorities of the Contracting Parties shall exchange information concerning the level of rivers with which the Contracting Parties are concerned, and concerning ice conditions in such rivers, if this information may help to avert danger from floods or from drifting ice. The said authorities shall also agree upon a regular system of signals to be used during periods of high water or drifting ice. Delay in communicating, or failure to communicate, such information shall not constitute ground for a claim to compensation for damage caused by flooding or drifting ice.

Article 3 of the 1968 Agreement between Bulgaria and Turkey<sup>41</sup> provides for exchange of information between the parties concerning floods and floating ice as quickly as possible. Furthermore, the parties agree to exchange hydrological and meteorological data concerning their frontier rivers. Article 3 reads:

#### Article 3

The two Contracting Parties agree to exchange information concerning floods and floating ice by the most expeditious means possible.

In addition, the Contracting Parties agree to exchange hydrological and meteorological data concerning the rivers which flow through the territory of both countries.

The procedure for mutual reporting and the exchange of data on these matters shall be laid down in technical protocols to be concluded between the two Contracting Parties.

82. Bilateral agreements dealing with activities involving nuclear materials appear to be more precise, with more *regulatory* provisions regarding the collection of data and exchange of information. For example, article 2 of the 1966 Convention between Belgium and France concerning the establishment of a nuclear power station<sup>42</sup> requires the parties to inform each other, by "all

appropriate means", regarding the studies carried out *before* the installations are put into service, *during* the operation of the station and also of the *occurrence of anything* in the station that might affect public health. This provision combines two stages of impact assessment: collection of data and exchange of information *prior* to the installation of the nuclear plant and monitoring *during* its operation. Article 2 reads:

#### Article 2

The Contracting Parties undertake to keep each other informed, by all appropriate means, regarding the studies carried out before the installations are put into service, the operation of the installations and the occurrence there of anything which might affect public health.

The company installing the station is a Franco-Belgian joint-stock company. The station is installed in France near its frontier with Belgium. It is not quite clear from the Convention whether the co-operation established between the States results from their *partnership* in the company installing the station or from the *closeness* of the station to the Belgian frontier.

83. The requirement concerning the collection and exchange of information becomes even more necessary and detailed once the activity involving the use of nuclear materials is carried out by the acting State in the territory of the potentially injured State. In such situations the collection and exchange of information are intended to ensure that the activity has met the *safety measures and standards* accepted between the parties or by the international community. For example, the United States of America, in its 1964 Agreement with Italy regarding the entrance and passage of the N.S. *Savannah*,<sup>43</sup> the United States nuclear ship, to and from Italian ports, agrees to submit to the Italian Government the safety report prepared in accordance with the 1960 Convention on the Safety of Life at Sea, in order to enable the latter to give approval for the entry of the N.S. *Savannah*. Article II of the Agreement provides:

#### Article II. Safety report

(a) To enable the Italian Government to give its approval for the entry of the ship into Italian ports and the use thereof, the Government of the United States shall submit a safety report prepared in accordance with regulation 7 of chapter VIII of the 1960 Convention on the Safety of Life at Sea and in accordance with recommendation 9 of annex C mentioned above.

...

Similar provisions exist in the 1963 Operational Agreement between the Netherlands and the United States of America concerning the entry of the N.S. *Savannah* into Netherlands ports:<sup>44</sup>

#### SAFETY ASSESSMENT AND OPERATING MANUAL

#### Article 7

To enable the Netherlands Government to decide whether or not approval shall be given for the ship's entry into Netherlands waters and the ship's use of the port area of Rotterdam, the Government of the United States shall provide a *safety assessment* prepared in accordance with regulation 7 of chapter VIII of the International Convention for the Safety of Life at Sea, 1960, and in accordance with recommendation 9 of annex C to the Final Act of the International Conference on Safety of Life at Sea, 1960.

<sup>39</sup> Agreement of 8 July 1948 between Poland and the USSR concerning the régime of the Polish-Soviet State frontier.

<sup>40</sup> Treaty of 24 February 1950 between Hungary and the USSR concerning the régime of the Soviet-Hungarian State frontier.

<sup>41</sup> Agreement of 23 October 1968 between Bulgaria and Turkey concerning co-operation in the use of the waters of rivers flowing through the territory of both countries.

<sup>42</sup> Convention of 23 September 1966 between Belgium and France on radiological protection with regard to the installations of the Ardennes nuclear power station.

<sup>43</sup> See footnote 20 above.

<sup>44</sup> See footnote 22 above.

## Article 8

As soon after receipt of the *safety assessment* as is practicable the Netherlands Government shall notify the Government of the United States of its decision as to the acceptance of the ship.

## Article 9

An *operating manual* prepared in accordance with regulation 8 of chapter VIII of the International Convention for the Safety of Life at Sea, 1960, and with recommendation 8 of annex C to the Final Act of the International Conference on Safety of Life at Sea, 1960, shall be kept on board the ship and shall be kept up to date.

(c) *Judicial decisions and State practice other than agreements*

84. Prior consideration of the interests of others has been explicitly recognized and referred to in some judicial decisions, diplomatic correspondence and relations between States. Sometimes assessments have been made unilaterally. For example, the United States of America made a *unilateral determination* to collect data prior to instituting nuclear tests to determine which area of the ocean would be the least likely to cause injuries to other international interests:

Eniwetok Atoll was selected as the site for the proving grounds after the careful consideration of all available Pacific islands. Bikini is not suitable as the site since it lacks sufficient land surface for the instrumentation necessary to the scientific observations which must be made. Of other possible sites, Eniwetok has the fewest inhabitants to be cared for, approximately 145, and, what is more important from a radiological standpoint, it is isolated and there are hundreds of miles of open seas in the direction in which winds might carry radioactive particles.

Construction will be supported through the Hawaiian islands, Johnston Island and Kwajalein Island.

The permanent transfer elsewhere of the island people now living on Aomon and Bijiiri islands in Eniwetok Atoll will be necessary. They are not now living in their original ancestral homes but in temporary structures provided for them on the two foregoing islands to which they were moved by United States forces during the war in the Pacific, after they had scattered throughout the atoll to avoid being pressed into labour service by the Japanese and for protection against military operations. The sites for the new homes of the local inhabitants will be selected by them. The inhabitants concerned will be reimbursed for lands utilized and will be given every assistance and care in their move to, and re-establishment at their new location. Measures will be taken to ensure that none of the inhabitants of the area are subject to danger; also that those few inhabitants who will move will undergo the minimum of inconvenience.<sup>45</sup>

85. The assessment was claimed to have been designed to minimize injury to the interests of other international actors:

Protection of health and safety is a primary consideration in the conduct of the HARDTACK series of nuclear weapons tests at the Eniwetok proving ground in the Pacific.

As announced previously, the test series will advance the development of weapons for defence against aggression whether airborne, missile-borne or otherwise mounted. Information on the effects of weapons will be obtained for military and civilian defence use. As in the past, test operations will be conducted in a manner designed to keep to as low as possible the public exposure to radiation arising from the detonation of nuclear weapons.

An important objective of the tests is the further development of nuclear weapons with greatly reduced radioactive fallout in that the area of radiation hazard may be kept as small as possible. This principle was first proved in the Eniwetok test series of 1956.

Various precautions have been taken to keep significant radioactive fallout within the confines of the danger area in the Pacific which was announced on February 14, 1958. With the exception of Joint Task Force facilities, there are no inhabited places within the danger area.

Extensive systems have been established to detect and measure radioactivity in the vicinity of the proving ground, in the United States, and in other parts of the world. Radiological monitoring and sampling will be conducted by several networks of stations extending from the proving ground to locations around the world. In addition marine surveys will be conducted to measure radioactivity in sea water and marine organisms.<sup>46</sup>

86. Attempts were made by the United States to *predict fallout based on weather patterns and meteorological models*:

*Fallout predictions*

Tests will be conducted only when the forecast pattern of significant fallout is entirely within the danger area. In forecasting fallout patterns, scientists will make use of improved methods of collecting and evaluating data which have been developed as a result of intensive study of the problem of predicting fallout in the vicinity of the proving ground.

Fallout predictions are dependent upon weather information. Experience has shown that weather data normally available in the Pacific Ocean area are inadequate for the needs of testing. Therefore for nuclear tests in the Pacific special arrangements are made to obtain additional data. For the 1958 tests thirteen special United States weather stations, located within several hundred miles of the proving ground, will participate in a weather network reporting to a central station. These stations will be staffed by military and civilian meteorologists. Weather reconnaissance will be carried on employing aircraft, ships, balloons and rockets.

Research has been conducted in the special field of tropical meteorology, and weather observers and forecasters have been instructed in the latest methods of forecasting which have been developed as a result of these studies.

Trained personnel have been organized into a fallout prediction unit. To assist in predicting fallout patterns they will utilize fallout computers which mechanize most of the mathematical procedures involved. Use of the computers will make possible rapid forecasts. Models of the clouds produced by previous large-scale nuclear detonations have been developed, and these also are expected to improve fallout predictions.<sup>47</sup>

87. In addition, a *danger area was declared* based on information regarding the width of the fallout area and the inhabitants therein:

*Danger area*

The danger area is generally rectangular in shape and comprises roughly 390,000 square nautical miles. It is approximately the same size as the area used in the 1956 test series, but its east and west boundaries have been shifted approximately 120 nautical miles to the west. Except for the test personnel, there are no inhabitants within the area.

All ships, aircraft and personnel have been cautioned to remain clear of the area which is bounded by a line joining the following geographic co-ordinates:

18° 30' N,	156° 00' E
18° 30' N,	170° 00' E
11° 30' N,	170° 00' E
11° 30' N,	166° 16' E
10° 15' N,	166° 16' E
10° 15' N,	156° 00' E

Notices have been given the widest possible distribution through marine, aviation and international organizations.

Regular air and sea searches of the area will be conducted in advance of the start of operations. Before each shot, the patrol of the danger area will be intensified, particularly in the area where fallout is forecast.

The Atomic Energy Commission has issued regulations which prohibit entry into the danger area of U.S. citizens and all other persons subject to the jurisdiction of the United States, its territories and possessions.

<sup>45</sup> See M. M. Whiteman, ed., *Digest of International Law* (Washington, D.C.), vol. 4, p. 555.

<sup>46</sup> *Ibid.*, p. 588.

<sup>47</sup> *Ibid.*, pp. 588-589.

The regulations effective from April 11, 1958 until the HARDTACK test series is completed prohibit entry, attempted entry or conspiracy to enter the danger area.<sup>48</sup>

88. It appears that the United States Atomic Energy Commission and the Department of Defense were investigating and making predictions on the effects of radiation. It is unclear whether United States or foreign private scientific institutions were permitted to participate in any form in those investigations and predictions. Owing to the nature of the activity and the particular security interest of the United States Government in maintaining exclusive control over the area where the tests were to be conducted, the collection of data by private or foreign government agencies was virtually impossible.<sup>49</sup>

89. According to United States forecasts, based on data analysed using scientific methods, no significant fallout or radioactivity would occur in inhabited areas:

*Radiation monitoring in proving ground region*

Radiological safety personnel, equipped with radiation detection and measuring instruments and two-way radios to enable them to communicate with the central Task Force Radiological Safety Office, will be stationed on nearby inhabited atolls, and at weather stations of the weather reporting network. In the unlikely event of significant fallout in an inhabited area, the monitors would warn the inhabitants and advise and assist them in taking safety measures. The monitors also have trained Marshallese medical practitioners and health aides in basic emergency measures.

*Radiation surveys of sea and marine life*

Outside of the testing area, the detonations are not expected to add enough radioactive material to natural levels of radioactivity in the ocean to be harmful to marine life. Experience shows that outside the testing area, resulting quantities of radioactivity in edible sea foods will result in exposures which will be very small compared with the limits for public exposure recommended by the United States National Committee for Radiation Protection and Measurement.

As in the past there will be a programme of study to explore the ultimate destination and behaviour of radioactivity in the sea water and in marine organisms. Sweeps by U.S. Navy Vessels both during and after the test series will include such measures as taking continuous readings of radioactivity in surface water, sampling of water at various depths, making tows to gather plankton—the tiny marine organisms which tend to concentrate radioactive materials in their tissues—and catching of fish for analysis for radioactivity.

In addition to these investigations, land and marine biological surveys again will be conducted at Eniwetok and Bikini and other atolls nearby. Samples of water and of plants and animals living in the lagoons and on the reefs and islands of the atolls will be collected and analysed for radioactivity.

*Fallout monitoring in United States*

The heavier particles fall out of the radioactive cloud at early times after a detonation, while their radioactivity is still high. Therefore, the highest levels of radioactivity occur over a local area downwind from the point of detonation. The area of significant fallout is expected to occur entirely within the uninhabited danger area surrounding the Eniwetok proving ground.

<sup>48</sup> *Ibid.*, p. 589.

<sup>49</sup> Normally, when a danger area was established no one was permitted to enter it without permission from the Atomic Energy Commission or the Department of Defense. For example, the regulations issued by the Atomic Energy Agency on 9 April 1958 in connection with the series of nuclear tests to be conducted at Eniwetok in 1958 provided in section 112.4:

"No United States citizen or other person . . . shall enter, attempt to enter or conspire to enter the danger area during the continuation of the HARDTACK test series, except with the express approval of appropriate officials of the Atomic Energy Commission or the Department of Defense." (*Federal Register* (Washington, D.C.), vol. 23, No. 73, 12 April 1958, p. 2401.)

As the radioactive cloud is transported away from the point of detonation, it is widely dispersed by air currents and diluted by normal air. Its radioactivity also decreases rapidly because of the normal process of radioactive decay. [Radioactive fallout consists of a mixture of radioisotopes, with varying half-lives. The mixture as a whole decreases in radioactivity in such a way that for every sevenfold increase in age, the total radioactivity is decreased 10-fold. Thus, the radioactivity at seven hours after H + 1 hour is only one tenth that at H + 1 hour, and in 49 hours is one hundredth, etc.] By the time the cloud from a detonation in the Eniwetok proving ground has travelled across a vast expanse of ocean, it will have become thoroughly dispersed into the air and will have lost most of its original radioactivity.

As a result, the exposures to radioactivity in the United States from the Eniwetok tests are expected to be low. Although levels of many times the normal background may be reached in some localities, these increases will be temporary and will not greatly increase the total exposure to radiation. Average exposures of residents of the United States to radiation from weapons tests during the past five years has been much less than the average exposure to radiation from natural sources during the same period.<sup>50</sup>

90. The same types of *predictions* were made by the British based on scientific, geographical and meteorological information on hand, *unilaterally*:

The tests will be high air bursts which will not involve heavy fallout. Extensive safety precautions have been taken. A danger area has been declared for the period 1st March to 1st August [1957] and all shipping and aircraft have been warned to keep clear of this area. The warning has been issued far in advance so that people should be clearly aware of the position. No permanently inhabited island lies within the danger area. Weather stations, weather ships and meteorological reconnaissance flights by aircraft will provide continuous meteorological information during the period of the tests. Provided persons stay outside the danger area they have nothing to fear. The temporary use of areas outside territorial waters for gunnery or bombing practice has, as such, never been considered a violation of the principles of freedom of navigation on the high seas. The present site has been carefully chosen because it lies far from inhabited islands and avoids as far as possible shipping and air routes. It is incidentally some 4,000 miles from Japan.<sup>51</sup>

91. As to the effect of the radiation on health, the British Government asked an independent committee under the auspices of the Medical Research Council to examine the matter:

As regards the general effects of radioactivity resulting from nuclear test explosions I am to state that before proceeding with their plans to develop and test weapons in the megaton range, Her Majesty's Government went most carefully into the question of potential hazards to health and asked an independent committee under the auspices of the Medical Research Council to examine the subject.

The Medical Research Council's report *The Hazards to Man of Nuclear and Allied Radiations* which was compiled by the leading authorities in the United Kingdom on this subject was published in June, 1956. The Prime Minister, Mr. Macmillan, told the House of Commons on 5th March:

"I understand that the Medical Research Council have no evidence that the amount of strontium-90 and other radioactive particles released by hydrogen bomb explosions which may become sources of internal radiation has reached a potentially dangerous level. The present and foreseeable hazards, including genetic effects, from the external radiation due to fall-out from the explosions of nuclear weapons fired at the present rate and in the present proportion of the different kinds, are considered to be negligible: accordingly I am not prepared to postpone the forthcoming test in the Pacific."

This statement was based on up-to-date advice from the Medical Research Council and the British Prime Minister, in reply to a further question in the House of Commons on 12 March, stated that the Medical Research Council was keeping the hazards to man from all sources of radiation under continuous review.<sup>52</sup>

<sup>50</sup> Whiteman, *op. cit.*, pp. 589-591.

<sup>51</sup> *Ibid.*, p. 598.

<sup>52</sup> *Ibid.*, p. 599.

92. Although it seems that States give priority to their own *security* interests over the interests of other States, at least in two instances of H-bomb tests the acting States made efforts to collect and publish data concerning the effect of their activities and to demonstrate that they had given some attention to the interests of other States. Such gathering of information, of course, was carried out *unilaterally* by the acting States themselves.

93. The potentially *injured State* has also taken the *initiative in suggesting that data be collected or studies made prior to initiation of an activity*. The United States of America, in correspondence with Mexico concerning highway construction which, according to the United States, could result in an *unnatural* accumulation of waters and cause injury to United States citizens and their properties in the event of heavy rains, made the suggestion to study the situation and *develop remedial plans*. On 20 May 1957, the United States Commissioner on the International Boundary and Water Commission wrote to the Mexican Commissioner as follows:

"In view of the aforescribed situation, I will appreciate an examination of the problem by your Section, and, if the conditions found are as reported to me, that appropriate arrangements be made with the proper authorities in Mexico to take such remedial measures as required to eliminate this threat to interests in my country." . . .

For two years thereafter, the United States Section of the Commission acted in this matter exclusively in an engineering advisory capacity to the Department of State and the American Consulate at Mexicali in their informal discussion of the projects and safety precautions considered essential with officials of the State Government of Baja California who were connected with the projects above described. In discussions with officials and engineers of the State Government of Baja California, United States engineers sought to avoid any implication that the State Government was obligated to obtain United States consent or approval of the U.S. Section of the International Boundary and Water Commission for its specific construction plans, and that in passing on them, the United States engineers were representing the views of their Government. A plan for culverts which was considered inadequate by United States engineers was finally abandoned by the State Government. A new set of plans drawn up by the State Government was sent to the American Consulate at Mexicali which, in turn, forwarded the plans to the United States Section of the Commission for a statement of its views. The United States Section replied that the plans appeared adequate with certain suggested modifications which were transmitted in a letter addressed to the Chief of the Department of Highways and Communications of Baja California (Rendon) by the United States Consul at Mexicali (M. W. Boyd) on October 24, 1958 . . . .<sup>53</sup>

94. The potentially injured State may suggest the study and collection of data to be made by a joint commission, as was suggested to Mexico by the United States during the *Rose Street Canal* correspondence:

The present unfortunate situation appears to have developed from the expansion of the city of Agua Prieta toward and beyond the flood arroyo. With the simultaneous expansion of the city of Douglas, the existing drainage canals have become inadequate and represent a matter of concern to both cities. As a consequence the *International Boundary and Water Commission undertook informal studies and surveys in 1949 and 1950*,<sup>54</sup> and the results suggest the desirability of constructing new flood control works in each of our two countries.

My Government agrees that the International Boundary and Water Commission should continue its studies with the intention of bringing them to a conclusion and of submitting a joint report as early as possible in this year. This report might include recommendations not only concerning remedial measures but also with respect to an equitable division of costs between our Governments . . . .<sup>54</sup>

95. Where the activity is in the nature of *protective measures*, such as flood control in light of imminent rains, the acting State may postpone the collection of data, considering that the need for the protective works outweighs the obligation of impact assessment. The acting State nevertheless usually informs the other State of activities which it intends to undertake. That procedure was followed by Mexico when it found itself compelled to take the necessary measures to avoid flooding:

Study of the new protective works has been practically at a standstill for the last two years, owing to the fact that the United States Section has declared that it must first carry out a series of investigations and make topographical studies.

My Government sincerely desires to reach an agreement with Your Excellency's Government on this question, but in view of the damage which the lack of a solution is causing the city of Agua Prieta and the fact that the rainy season is approaching, the Government of Mexico finds itself compelled to take the necessary measures sufficiently in advance, so that the floods may not be repeated this year. Consequently, the Mexican authorities will, on May 1 next, begin building certain protective works to prevent the entry into Agua Prieta of rain water collected by the Rose Street Canal in Douglas.

I take the liberty of bringing the foregoing to Your Excellency's attention to the end that the proper authorities of your Government may take such measures as they consider advisable to prevent consequences which the return of such water might have in the city of Douglas.<sup>55</sup>

96. In its award in the *Trail Smelter* case, the tribunal briefly described and highly commended the comprehensive and long-term experiments and collections of data analysed in order to develop a permanent régime fulfilling the duty of care required of the Canadian smelter. The tests had been carried out over a period of *three years* under the supervision of what the tribunal called "well-established and known scientists" in chemistry, plant physiology, meteorology and the like, for the purpose of collecting data on the pollution caused by the smelter and on the damage to United States interests. In the opinion of the tribunal, the study was "probably the most thorough [one] ever made of any area subject to atmospheric pollution by industrial smoke".<sup>56</sup> Some of the factors considered had been used for the first time in evaluating smoke control. The methods successfully used in testing eventually became embodied in the régime adopted by the tribunal:

The foregoing paragraphs are the result of an extended investigation of meteorological and other conditions which have been found to be of significance in smoke behaviour and control in the Trail area. The attempt made to solve the sulphur dioxide problem presented to the tribunal has finally found expression in a régime which is now prescribed as a measure of control.

The investigations made during the past three years on the application of meteorological observations to the solution of this problem at Trail have built up a fund of significant and important facts. This is probably the most thorough study ever made of any area subject to atmospheric pollution by industrial smoke. Some factors, such as atmospheric turbulence and the movement of the upper air currents have been applied for the first time to the question of smoke control. All factors of possible significance, including wind directions and velocity, atmospheric temperatures, lapse rates, turbulence, geostrophic winds, barometric pressures, sunlight and humidity, along with atmospheric sulphur dioxide concentrations, have been studied. As said above, many observations have been made on the movements and sulphur dioxide concentrations of the air at higher levels by means of pilot and captive balloons and by airplane, by night and by day. Progress has been made in breaking up the long winter fumigations and in reducing their intensity. In carrying finally over to

<sup>53</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 6, pp. 260-261.

<sup>54</sup> *Ibid.*, p. 264.

<sup>55</sup> *Ibid.*

<sup>56</sup> United Nations, *Reports of International Arbitral Awards*, vol. III, p. 1973.

the non-growing season with a few minor modifications a régime of demonstrated efficiency for the growing season, there is a sound basis for confidence that the winter fumigations will be kept under control at a level well below the threshold of possible injury to vegetation. Likewise, for the growing season a régime has been formulated which should throttle at the source the expected diurnal fumigations to a point where they will not yield concentrations below the international boundary sufficient to cause injury to plant life. This is a goal which this tribunal has set out to accomplish.<sup>37</sup>

## B. Prior negotiation and consultation

97. The object of negotiations and consultations with the potentially injured State prior to the commencement or during the performance of activities may be to exchange scientific data on the projects, to consider the views of the potentially injured State and those of the acting State regarding the potential transboundary effects of activities, or to solicit the consent of the potentially injured State regarding the undertaking of activities with whatever consequences they may have. Such prior negotiations and consultations may relate to a variety of subjects, such as the nature of the injury (material, non-material, potential), and who is to decide what constitutes harm and in accordance with what criteria and procedure. Thus prior negotiation is a procedure by which the parties may agree upon the resolution of their conflicting interests.

98. Furthermore, paragraph 1 of Article 33 of the United Nations Charter recognizes negotiation and conciliation as preferable means of resolving conflicts among States. Under this Article, States which are parties to any dispute . . . the continuance of which is likely to endanger the maintenance of international peace and security, shall, first of all, seek a solution by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice. This is not to claim that all disputes relating to activities that may cause transboundary injuries are likely to threaten international peace and security. The point is that negotiation has been recognized as an important first step in peacefully reconciling conflicting interests.

### (a) Multilateral agreements

99. A more general requirement of prior consultation is embodied in article 5 of the 1979 Convention on Long-range Transboundary Air Pollution:

#### Article 5

Consultations shall be held, upon request, at an early stage between, on the one hand, Contracting Parties which are actually affected by or exposed to a significant risk of long-range transboundary air pollution and, on the other hand, Contracting Parties within which and subject to whose jurisdiction a significant contribution to long-range transboundary air pollution originates, or could originate, in connection with activities carried on or contemplated therein.

Under this article, consultation shall take place "upon request" of either the acting or the potentially injured State, when there is a "significant" risk of air pollution. The word "significant" has not been defined; it will presumably be decided between the States involved. The reference to the acting State in this article is also signifi-

cant. It imposes the obligation of consultation equally upon the State under whose jurisdiction the injurious activity has taken place and upon the State under whose jurisdiction the injurious activity "could" take place. Thus *reasonable grounds* for causality may be sufficient.

100. The 1974 Convention for the Prevention of Marine Pollution from Land-based Sources uses equally broad language. It provides in article 9, paragraph 1, for consultation upon request of either the acting or the injured State when the activity of the acting State is "likely to prejudice the interests" of the other State:

#### Article 9

1. When pollution from land-based sources originating from the territory of a Contracting Party by substances not listed in part I of annex A to the present Convention is likely to prejudice the interests of one or more of the other Parties to the Convention, the Contracting Parties concerned undertake to enter into consultation, at the request of any one of them, with a view to negotiating a co-operation agreement.

...

101. The 1982 United Nations Convention on the Law of the Sea provides in article 142, paragraph 2, that the State involved in the exploitation of mineral deposits of the sea-bed across the limits of the national jurisdiction of a coastal State must consult that State and maintain a *system* of prior notification:

#### Article 142. Rights and legitimate interests of coastal States

...

2. Consultations, including a system of prior notification, shall be maintained with the State concerned, with a view to avoiding infringement of such rights and interests. In cases where activities in the Area may result in the exploitation of resources lying within national jurisdiction, the prior consent of the coastal State concerned shall be required.

The régime here prescribed appears as a more systematic and institutionalized form of prior notification. Thus article 206 of the Convention requires notification by the acting State when it has *reasonable grounds* for believing that activities to be undertaken within its jurisdiction may cause injuries to others. That notification should be in accordance with the procedures stipulated in article 205:

#### Article 205. Publication of reports

States shall publish reports of the results obtained pursuant to article 204 or provide such reports at appropriate intervals to the competent international organizations, which should make them available to all States.

102. Even in connection with activities of self-help, the acting State may be required to consult the potentially injured States. For example, article III of the 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties requires a coastal State, *before* taking any measures, to consult with other States affected by the maritime casualty, particularly with the flag State, and give notice of the measures which it intends to take. The coastal State may also consult with independent experts before any measure is taken. The relevant paragraphs of article III read:

#### Article III

When a coastal State is exercising the right to take measures in accordance with article I, the following provisions shall apply:

<sup>37</sup> *Ibid.*, pp. 1973-1974.



(a) before taking any measures, a coastal State shall proceed to consultations with other States affected by the maritime casualty, particularly with the flag State or States;

(b) the coastal State shall notify without delay the proposed measures to any persons physical or corporate known to the coastal State, or made known to it during the consultations, to have interests which can reasonably be expected to be affected by those measures. The coastal State shall take into account any views they may submit;

(c) before any measure is taken, the coastal State may proceed to a consultation with independent experts, whose names shall be chosen from a list maintained by the Organization;

...

(f) measures which have been taken in application of article I shall be notified without delay to the States and to the known physical or corporate persons concerned, as well as to the Secretary-General of the Organization.

103. Article 12, paragraph 3, of the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region provides that, when appropriate, the contracting States may consult other States which may be affected by their activities (see para. 60 above). The requirement of prior negotiation and consultation in this Convention is not obligatory; it appears to be based on the principle of co-operation.

#### (b) *Bilateral agreements*

104. In bilateral agreements, consultation and prior negotiation appear to be envisaged on the basis of, among other things, the *spirit of co-operation* between neighbouring States, or on the basis of their *uncertainty as to the legal effects* of their conduct if such conduct causes extraterritorial injuries. The 1975 Agreement between Canada and the United States of America relating to weather modification activities<sup>59</sup> combines the two aforesaid elements. The preamble to the Agreement states that, because of the geographic proximity of the two States, the effects of weather modification activities carried out by either party or its nationals may affect the territory of the other. It states further that a prompt exchange of information regarding the nature and extent of weather modification activities may facilitate development of the technology of weather modification. The preamble also refers to the "traditions" of prior *notification* and *consultation* and the close *co-operation* between the two States, and stresses the "desirability of the *development of international law*\* relating to weather modification activities having transboundary effects". The relevant paragraphs of the preamble read:

Aware, because of their geographic proximity, that the effects of weather modification activities carried out by either Party or its nationals may affect the territory of the other;

...

Taking into particular consideration the special traditions of prior notification and consultation and the close co-operation that have historically characterized their relations;

Believing that a prompt exchange of pertinent information regarding the nature and extent of weather modification activities of mutual interest may facilitate the development of the technology of weather modification for their mutual benefit;

Article II of the Agreement requires the responsible agencies of the contracting parties to transmit information relating to weather modification activities of mutual interest. Such information, whenever possible, is to be transmitted prior to the commencement of the

activities. The article anticipates that such *information* will be *transmitted* within five working days of its receipt by a responsible agency. Article II, paragraph 1, reads:

#### *Article II*

1. Information relating to weather modification activities of mutual interest acquired by a responsible agency through its reporting requirements or otherwise, shall be transmitted as soon as practicable to the responsible agency of the other Party. Whenever possible, this information shall be transmitted prior to the commencement of such activities. It is anticipated that such information will be transmitted within five working days of its receipt by a responsible agency.

...

Each contracting party agrees, under article IV of the Agreement, to *notify* and *fully inform* the other of any weather modification activity of mutual interest prior to the commencement of such activities. Thus every effort is to be made to provide such notice as *far in advance* of such activities as possible. The article provides:

#### *Article IV*

In addition to the exchange of information pursuant to article II of this Agreement, each Party agrees to notify and to fully inform the other concerning any weather modification activities of mutual interest conducted by it prior to the commencement of such activities. Every effort shall be made to provide such *notice as far in advance\** of such activities as may be possible, bearing in mind the provisions of article V of this Agreement.

Under article V of the Agreement, the parties agree to *consult* each other on weather modification activities in the light of their domestic laws and administrative regulations:

#### *Article V*

The Parties agree to consult, at the request of either Party, regarding particular weather modification activities of mutual interest. Such consultations shall be initiated promptly on the request of a Party, and in cases of urgency may be undertaken through telephonic or other rapid means of communication. Consultations shall be carried out in the light of the Parties' laws, regulations, and administrative practices regarding weather modification.

105. An elaborate procedure for notification prior to an undertaking is provided for in the 1922 Treaty between Germany and Denmark concerning their frontier waters,<sup>59</sup> article 2 of which establishes a Frontier Water Commission to deal with all questions relating to the frontier waters specified in the Treaty. Owing to the structure and authority of the Commission, individual nationals of the parties as well as the various districts and counties of the two countries may negotiate either through the Commission or with the Commission itself. Accordingly, any establishment of new or extensive alteration of existing works on any parts of the frontier waters referred to in the Treaty must be approved by the Commission. Article 30 of the Treaty provides that, in such cases, there must be public notification, to which the attention of all persons who may *clearly* suffer damage from the activity must be drawn by *registered letter*. The requirement of direct notification is thus confined to persons who will *clearly* suffer damage. There must nevertheless be *public notification* of the activity. The relevant paragraphs of article 30 read:

<sup>59</sup> See footnote 15 above.

<sup>59</sup> Agreement of 10 April 1922 for the settlement of questions relating to watercourses and dikes on the German-Danish frontier.



## Article 30

...

... the proposed use of the watercourse shall be brought to the notice of the *public*\* in the manner which is customary in the locality in all communes or manorial districts (Gutsbezirke), the land of which might be affected by the operation of the works in the event of their being authorized.

Further, the attention of all persons who will clearly suffer damage from the authorization of the works shall be drawn to the public notification by means of registered letters.

The notification must describe the authorized activity and name the authorities to which objections may be made or requests for taking preventive measures submitted, etc. It must also establish a time-limit of from two to six weeks for raising objections. Article 31 of the Treaty sets out the detailed content of the notification as well as the appeal procedure by individual claimants:

## Article 31. Content of notification

Notifications shall state where the drawings and explanations which have been submitted may be inspected, and shall mention the authorities to which objections to the authorization and also applications for the erection and upkeep of installations for the prevention of damage, or applications for compensation shall be addressed in writing or be made orally in official form. A time limit shall also be fixed for lodging objections or making applications. The period allowed shall be not less than two, and not more than six weeks. It shall begin to run from the day following that upon which the gazette containing the final notification is published.

It shall be stated in the notification that all persons who have not lodged any objection or made any application within the time limit fixed shall lose their rights in that connection, but that applications for the erection and upkeep of installations or for compensation may be made at a later date if they are based upon damage which could not be foreseen during the period covered by the time limit.

Even after the expiration of the appointed time a person who has suffered damage shall not be debarred from submitting a claim provided he can show that he was prevented by circumstances over which he had no control from submitting such claim within the time limit.

The right of establishing claims after the expiration of the appointed time is subject to prescription three years after the date on which the person who suffered damage learned of the existence of such damage.

The same time limit shall also be fixed in the notification for other applications for the authorization of a particular use of the watercourse by which the use proposed by the first applicant would be restricted. It shall also be made clear that applications of this kind made after the expiration of the appointed time in connection with the same matter will not be taken into consideration.

A suitable additional period may be allowed for the production of evidence.

106. An elaborate procedure for prior consultation and negotiation is also provided for in article 3 of chapter I of the 1931 Convention between Romania and Yugoslavia concerning their frontier waters.<sup>60</sup> Under this article, if either party intends to make any alterations or changes in its own territory which might affect the hydraulic system in the basin, it shall *inform the other State by registered letter with notification of receipt*. This is the first step required to reach an *agreement* with the other State about the proposed changes. Such proposed changes may not be carried out without reaching an *agreement* with the other State. But if the other State does not acknowledge receipt or make any observation within two and a half months from the date of the communication, the acting State may proceed with its activity without further formalities. If the parties are unable to reach agreement within a *reasonable*

*period*, the Convention envisages a different procedure, which does not define this period. Article 3 of chapter I provides:

## Article 3

Should either State propose to make any alterations or take any measures or undertake any works in its own territory such as might change to an appreciable extent the hydraulic system in the basins mentioned in article 1 above, it shall, by *registered letter with notification of receipt*\* send to the other State notice of its intentions, together with a *summarized description of such works*,\* alterations or measures, with a view to the preliminary establishment of the agreement provided for by article 292 of the Treaty of Trianon.

Such communication shall be confirmed within a period of 15 days.

If within two and a half months from the date of the communication the latter State has neither acknowledged receipt nor made any observations, the proposed alterations, measures or works may be undertaken without further formalities.

In the contrary event, the proposed alterations, measures or works may not be carried out until agreement has been reached between the two States.

If agreement is not reached within a reasonable period, action shall be taken in accordance with article 6 of the regulations of the C.R.E.D.

107. The 1929 Convention between Norway and Sweden<sup>61</sup> provides for a procedure of consultation between the two States concerning activities undertaken by private entities of one of those States that might cause injuries in the other State. Article 14 of the Convention provides that applications for authorizations of certain activities must be addressed to the competent authorities of the State in whose territory the activity is to be undertaken, together with a detailed description of the activity and its plan. The competent authorities must send a copy of this application and plans, etc. to the other State. The article reads:

## PROCEDURE

## APPLICATIONS

## Article 14

1. Applications for authorizations for an undertaking shall be addressed to the competent authority in the country in which the undertaking is to be carried out. If the waterfall, the immovable property or the transport or floating interest on account of which the undertaking is to be carried out belongs to the other country, the application shall be accompanied by a declaration from that State to the effect that it has no objection to the application being considered.

2. Applications shall be accompanied by the plans, specifications and particulars required to enable the effects which the undertaking will produce in both countries to be determined.

3. When an application has been received by the authority in the country in which the undertaking is to be carried out, a copy, together with the enclosures, shall be transmitted to the other State.

(c) *Judicial decisions and State practice other than agreements*

108. The obligation of prior consultation and negotiation concerning activities with potentially injurious consequences outside the national territory has been developed in a number of judicial decisions. In its advisory opinion of 15 October 1931 in the *Railway Traffic between Lithuania and Poland* case, the Permanent Court of International Justice stated that the obligation to negotiate was “not only to *enter*\* into negotiations but also to *pursue*\* them *as far as possible with a view to concluding agreements*\*”.<sup>62</sup> Repeating the same re-

<sup>60</sup> General Convention of 14 December 1931 between Romania and Yugoslavia concerning the hydraulic system.

<sup>61</sup> See footnote 36 above.

<sup>62</sup> *P.C.I.J., Series A/B, No. 42*, p. 116.

quirement, the International Court of Justice stated in its judgment of 20 February 1969 relating to the *North Sea Continental Shelf* cases that, prior to any unilateral delimitation of the continental shelf, the parties had an obligation to enter into negotiations going beyond a merely formal process and to behave with the intention of reaching a satisfactory conclusion. The Court ruled as follows:

(a) *the parties are under an obligation to enter into negotiations with a view to arriving at an agreement,\** and not merely to go through a formal process of negotiation as a sort of prior condition for the automatic application of a certain method of delimitation in the absence of agreement; *they are under an obligation so to conduct themselves that the negotiations are meaningful,\** which will not be the case when either of them insists upon its own position without contemplating any modification of it;<sup>63</sup>

The Court elaborated on the content of the obligation to negotiate: the parties were required to take into account all circumstances and to apply *equitable principles*. Thus it referred to and enumerated principles and factors which should be evaluated and accommodated in order to reach equitable principles in the case in point:

(b) *the parties are under an obligation to act in such a way that, in the particular case, and taking all the circumstances\* into account, equitable principles are applied,—for this purpose the equidistance method can be used, but other methods exist and may be employed, alone or in combination, according to the areas involved;*<sup>64</sup>

This is a clear reference to the need to balance the interests of Denmark and the Netherlands with those of the Federal Republic of Germany. The Court noted that the duty to negotiate was simply an application of the more general principle of international relations that:

the judicial settlement of international disputes "is simply an alternative to the direct and friendly settlement of such disputes between the parties" (*Free Zones of Upper Savoy and the District of Gex*, P.C.I.J. Series A, No. 22, p. 13).<sup>65</sup>

The negotiations having been found unsatisfactory, the Court considered that initiation of fresh negotiations was the appropriate remedy:

... In the present case, it needs to be observed that whatever the details of the negotiations carried on in 1965 and 1966, they failed of their purpose because the Kingdoms of Denmark and the Netherlands, convinced that the equidistance principle alone was applicable, in consequence of a rule binding upon the Federal Republic, saw no reason to depart from that rule; and equally, given the geographical considerations stated in the last sentence of paragraph 7 above, the Federal Republic could not accept the situation resulting from the application of that rule. So far therefore *the negotiations have not satisfied the conditions indicated in paragraph 85 (a), but fresh negotiations are to take place on the basis of the present judgment.*<sup>66</sup>

109. In its award on 16 November 1957 in the *Lake Lanoux* case, the arbitral tribunal recognized, in fact, the more general requirement of prior negotiation, but not of agreement. The tribunal noted that, in certain situations, the other party, namely, the potentially injured State, might, in violation of the rules of good faith, paralyse genuine negotiation efforts. The tribunal stated that in such circumstances sanctions might be applied:

In effect, in order to appreciate in its essence the necessity for prior agreement, one must envisage the hypothesis in which the interested States cannot reach agreement. In such case, it must be admitted that

the State which is normally competent has lost its right to act alone as a result of the unconditional and arbitrary opposition of another State. This amounts to admitting a "right of assent", a "right of veto", which at the discretion of one State paralyses the exercise of the territorial jurisdiction of another.

That is why international practice prefers to resort to less extreme solutions by confining itself to obliging the States to seek, by preliminary negotiations, terms for an agreement, without subordinating the exercise of their competences to the conclusion of such an agreement. Thus, one speaks, although often inaccurately, of the "obligation of negotiating an agreement". In reality, the engagements thus undertaken by States take very diverse forms and have a scope which varies according to the manner in which they are defined and according to the procedures intended for their execution; but the reality of the obligations thus undertaken is incontestable and sanctions\* can be applied in the event, for example, of an *unjustified breaking off of the discussions, abnormal delays, disregard of the agreed procedures, systematic refusals to take into consideration adverse proposals or interests, and, more generally, in cases of violation of the rules of good faith\** (*Tacna-Arica* arbitration, United Nations, *Reports of International Arbitral Awards*, vol. II, pp. 921 *et seq.*; *Case of Railway Traffic between Lithuania and Poland*, P.C.I.J., Series A/B, No. 42, p. 108).<sup>67</sup>

The tribunal did not elaborate on what those sanctions might be. The duty of prior negotiation was recognized as *essential* in balancing interests, since only the *affected State* could *accurately evaluate* whether a particular activity might affect its interests:

... The conflicting interests aroused by the industrial use of international rivers must be reconciled by mutual concessions embodied in comprehensive agreements. States have a duty to seek to enter into such agreements. The "interests" safeguarded in the treaties between France and Spain included interests beyond specific legal rights. A State wishing to do that which will affect an international water-course cannot 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.<sup>68</sup>

110. The obligation to negotiate *genuinely and in good faith* was thus restated:

... Consultations and negotiations between the two States must be genuine, must comply with the rules of good faith and must not be mere formalities. The *rules of reason and good faith\** are applicable to procedural rights and duties relative to the sharing of the use of international rivers; and the subjecting by one State of such rivers to a form of development which causes the withdrawal of some supplies from its basin, are not irreconcilable with the interests of another State.<sup>69</sup>

111. The principle of prior negotiation applies also to disputes involving the distribution of shared resources in the common domain. For example, in its judgment of 25 July 1974 in the *Fisheries Jurisdiction* case, the International Court of Justice held that Iceland could not unilaterally extend its fishing rights beyond the area of 12 miles from its baselines because, among other things, Iceland had failed to observe the duty of prior negotiation with the States concerned. The Court held that both the United Kingdom and Iceland were under the *mutual obligation* to negotiate in good faith for the equitable solution of the question of distribution of their fishery rights. The relevant passage of the Court's judgment reads:

<sup>63</sup> *International Law Reports* 1957 (London, 1961), vol. 24, p. 128. See also *Yearbook* ... 1974, vol. II (Part Two), pp. 194-199, document A/5409, paras. 1055-1068.

<sup>64</sup> Summary of the tribunal's considerations in *International Law Reports* 1957 (see footnote 67 above), p. 119.

<sup>65</sup> *Ibid.*

<sup>63</sup> *I.C.J. Reports* 1969, p. 47, para. 85.

<sup>64</sup> *Ibid.*

<sup>65</sup> *Ibid.*, para. 87.

<sup>66</sup> *Ibid.*

79. For these reasons,

THE COURT,

by ten votes to four,

- (1) finds that the regulations concerning the fishery limits off Iceland (*Reglugerð um fiskveiðilandshegls Islands*) promulgated by the Government of Iceland on 14 July 1972 and constituting a unilateral extension of the exclusive fishing rights of Iceland to 50 nautical miles from the baselines specified therein are not opposable to the Government of the United Kingdom;
- (2) finds that, in consequence, the Government of Iceland is not entitled unilaterally to exclude United Kingdom fishing vessels from areas between the fishery limits agreed to in the exchange of notes of 11 March 1961 and the limits specified in the Icelandic regulations of 14 July 1972, or unilaterally to impose restrictions on the activities of those vessels in such areas;

by ten votes to four,

- (3) holds that the Government of Iceland and the Government of the United Kingdom are under mutual obligations to undertake negotiations in good faith for the equitable solution of their differences concerning their respective fishery rights in the areas specified in subparagraph 2;<sup>70</sup>

It appears from this decision that activities beyond a State's territorial jurisdiction with potentially direct and substantial injuries to other States may be undertaken only after prior negotiations leading to the consent of the affected States. The Court did not address the issue of what should be done if no agreement was reached after *bona fide* negotiations.

112. In State practice, the prior negotiations regarding the site of nuclear power plants in Central Europe confirmed this principle.<sup>71</sup> In Dukovany, Czechoslovakia, approximately 35 kilometres from the Austrian border, two Soviet-designed 440 megawatt electrical power reactors were scheduled to be operating by 1980. The closeness of the location of the Austrian border led to a demand by the Austrian Ministry for Foreign Affairs for joint talks with Czechoslovakia about the safety of the facility. This was accepted by the Czech Government.<sup>72</sup> More extensive negotiations took place between Switzerland and Austria regarding Swiss plans to construct a 900 MW nuclear power plant near Rütli, in the Upper Rhine Valley, close to the Austrian border. As a result of Austrian objections,<sup>73</sup> the Swiss Government entered into consultations with the Austrian Federal Government as well as with the Voralberg State Government, the federated State which would have been affected by the Swiss project.<sup>74</sup> The talks seem to have focused on the legal principles of good neighbourliness.<sup>75</sup> The Swiss Government evidently re-evaluated the entire project but, shortly before the re-evaluation was completed, the Austrian Foreign Minister stated in a press conference that, if the Government of the federated State of Voralberg still believed that the re-

vised project was in conflict with the principle of good neighbourliness, the Austrian Government would be committed to asserting formally the illegality of the project.<sup>76</sup> There is no direct evidence to conclude that the postponement of the construction of the nuclear plant by the Swiss Government was due to the Austrian objection or to acceptance of Austria's legal arguments. A number of other factors could have affected the Swiss decision, such as domestic opposition to the plant,<sup>77</sup> or the Government's energy policy.<sup>78</sup> In evaluating the situation, at least one author has concluded that the Austrian objection was an important element affecting the Swiss decision concerning the nuclear plant.<sup>79</sup>

113. In 1973, the Belgian Government announced its intention to construct a refinery at Lanaye, near its frontier with the Netherlands. The Netherlands Government voiced its concern because the project threatened not only the nearby Netherlands national park but also other neighbouring countries. It stated that it was an established principle in Europe that, before the initiation of any activities that might cause injuries to neighbouring States, the acting State must negotiate with those States. The Netherlands Government appears to have been referring to an existing or expected *regional* standard of behaviour. Similar concern was expressed by the Belgian Parliament, which asked the Government how it intended to resolve the problem. The Government stated that the project had been postponed and that the matter was being negotiated with the Netherlands Government. The Belgian Government further assured Parliament that it respected the principles set out in the Benelux accords, to the effect that the parties should inform each other of those of their activities that might have harmful consequences for the other member States.<sup>80</sup>

# 1. DEFINITION OF HARM

114. The characterization of harm or injury for the purposes of impact assessment may differ from that of harm or injury entailing liability; harm or injury requiring prior consultations may or may not be compensable as a consequence of liability.

115. Injury, for purposes of prior negotiation and consultation, may be subdivided into material, non-material and potential. There is no intention here clearly to define injury or harm. For the purposes of this study, material harm means "physical", "quantitative" or "tangible" injury to a State's interests. Non-material harm refers to moral or qualitative harm, for example an affront to the dignity or respect of a State, such as the broadcasting of material to another State that is inconsistent with its internal order and its territorial integrity. With regard to some types of activities, such as nuclear tests in the atmosphere, it is almost certain that

<sup>70</sup> *I.C.J. Reports 1974*, p. 34.

<sup>71</sup> Details concerning these negotiations are derived in part from the article by Günther Handl, "Conduct of abnormally dangerous activities in frontier areas: The case of nuclear power plant siting", *Ecology Law Quarterly*, Berkeley, Cal., vol. 7, 1978, p. 1.

<sup>72</sup> *Österreichische Zeitschrift für Außenpolitik*, vol. 15, 1975, p. 290, cited in Handl, *loc. cit.*, p. 28 and footnote 136.

<sup>73</sup> *Neue Zürcher Zeitung* (foreign edition), No. 118, 1 May 1974, p. 27, cited in Handl, *loc. cit.*, p. 29, footnote 141.

<sup>74</sup> *Österreichische Zeitschrift* . . . , vol. 12, 1972, p. 349, and *idem*, vol. 14, 1974, p. 224, cited in Handl, *loc. cit.*, p. 29, footnote 143.

<sup>75</sup> *Österreichische Zeitschrift* . . . , vol. 13, 1973, p. 162, cited in Handl, *loc. cit.*, p. 29, footnote 144.

<sup>76</sup> The Austrian Foreign Minister stated that this position had been communicated to the Swiss Government. See *Österreichische Zeitschrift* . . . , vol. 14, 1974, p. 288, cited in Handl, *loc. cit.*, p. 29 and footnote 145.

<sup>77</sup> See footnote 73 above.

<sup>78</sup> Handl, *loc. cit.*, p. 30.

<sup>79</sup> *Ibid.*

<sup>80</sup> Belgium Parliament, *Questions et réponses* (Questions and answers) bulletin, 19 July 1973.

at some point in the future some harm will be done to certain interests. However, with respect to other types of activities, harm is not expected to result in every case but may result in some cases only. This latter type of injury is referred to as potential injury and includes prejudice to future interests and harm likely to result from accidental injuries. The characterization of substantial harm, and its point of separation from tolerable harm not requiring prior negotiation and consultation, is a difficult issue that does not appear to have been resolved or treated uniformly in State practice. Some treaties enumerate the kinds of injuries that are not to be tolerated among the parties, so that activities leading to them are prohibited. Other treaties refer in general terms to activities or certain activities leading to some injuries. There are also treaties and judicial decisions which require consultation and prior negotiation for any activity. It would not be totally accurate, however, to assume that the requirement of negotiation and consultation in the latter case is due to the inherent character of certain activities themselves, and not of the injuries they cause. When it is known that certain injuries will *always* be caused by certain activities, the activities themselves are regulated so as to prevent or minimize their harmful effects.

#### (a) *Multilateral agreements*

116. In some multilateral conventions, the concept of harm is described in general terms as a condition affecting human life and changing the quality of a shared resource such as marine fauna and flora. These conventions, then, enumerate hazardous substances whose introduction into shared domains or the territory of another party is considered harmful. Some conventions list substances whose disposal should be progressively either eliminated or restricted. The list of substances not injurious for purposes of liability may nevertheless provide sufficient grounds for negotiation and consultation. For example, the 1974 Convention for the Prevention of Marine Pollution from Land-based Sources provides in article 4 an obligation for parties to eliminate or restrict the pollution of the environment by certain substances:

#### *Article 4*

##### 1. The Contracting Parties undertake:

(a) to eliminate, if necessary by stages, pollution of the maritime area from land-based sources of substances listed in part I of annex A to the present Convention;

(b) to limit strictly pollution of the marine area from land-based sources of the substances listed in part II of annex A to the present Convention.

2. In order to carry out the undertakings in paragraph 1 of this article, the Contracting Parties, jointly or individually as appropriate, shall implement programmes and measures:

(a) for the elimination, as a matter of urgency, of pollution of the maritime area from land-based sources by substances listed in part I of annex A to the present Convention;

(b) for the reduction or, as appropriate, elimination of pollution of the maritime area from land-based sources by substances listed in part II of annex A to the present Convention. These substances shall be discharged only after approval has been granted by the appropriate authorities within each contracting State. Such approval shall be periodically reviewed.

3. The programmes and measures adopted under paragraph 2 of this article shall include, as appropriate, specific regulations or standards governing the quality of the environment, discharges into the maritime area, such discharges into watercourses as affect the

maritime area, and the composition and use of substances and products. These programmes and measures shall take into account the latest technical developments.

The programmes shall contain time-limits for their completion.

4. The Contracting Parties, furthermore, jointly or individually as appropriate, implement programmes or measures to forestall, reduce or eliminate pollution of the maritime area from land-based sources by a substance not then listed in annex A to the present Convention, if scientific evidence has established that a serious hazard may be created in the maritime area by that substance and if urgent action is necessary.

117. Thus the Convention lists substances the deposits of which are to be *prohibited*. Part I of annex A lists these substances:

#### *Annex A*

The allocation of substances to parts I, II and III below takes account of the following criteria:

- (a) persistence;
- (b) toxicity or other noxious properties;
- (c) tendency to bio-accumulation.

These criteria are not necessarily of equal importance for a particular substance or group of substances, and other factors, such as the location and quantities of the discharge, may need to be considered.

#### **PART I**

The following substances are included in this part:

- (i) because they are not readily degradable or rendered harmless by natural processes; and
  - (ii) because they may either:
    - (a) give rise to dangerous accumulation of harmful material in the food chain, or
    - (b) endanger the welfare of living organisms causing undesirable changes in the marine ecosystems, or
    - (c) interfere seriously with the harvesting of sea foods or with other legitimate uses of the sea; and
  - (iii) because it is considered that pollution by these substances necessitates urgent action:
1. Organohalogen compounds and substances which may form such compounds in the marine environment, excluding those which are biologically harmless, or which are rapidly converted in the sea into substances which are biologically harmless;
  2. Mercury and mercury compounds;
  3. Cadmium and cadmium compounds;
  4. Persistent synthetic materials which may float, remain in suspension or sink, and which may seriously interfere with any legitimate use of the sea;
  5. Persistent oils and hydrocarbons of petroleum origin.

118. Part II of annex A lists substances the disposal of which is to be *strictly limited*:

#### **PART II**

The following substances are included in this part because, although exhibiting similar characteristics to the substances in part I and requiring strict control, they seem less noxious or are more readily rendered harmless by natural processes:

1. Organic compounds of phosphorus, silicon, and tin and substances which may form such compounds in the marine environment, excluding those which are biologically harmless, or which are rapidly converted in the sea into substances which are biologically harmless;
2. Elemental phosphorus;
3. Non-persistent oils and hydrocarbons of petroleum origin;
4. The following elements and their compounds:
  - arsenic
  - chromium
  - copper
  - lead
  - nickel
  - zinc;

5. Substances which have been agreed by the Commission as having a deleterious effect on the taste and/or smell of products derived from the marine environment for human consumption.

119. Part III includes a list of substances similar to those listed in part I but, because they are already the subject of research by several international organizations and institutions, they are put into a separate category:

#### PART III

The following substances are included in this part because, although they display characteristics similar to those of substances listed in part I and should be subject to stringent controls with the aim of preventing and, as appropriate, eliminating the pollution which they cause, they are already the subject of research, recommendations and, in some cases, measures under the auspices of several international organizations and institutions; those substances are subject to the provisions of article 5:

Radioactive substances, including wastes.

120. After giving an exhaustive list of substances the disposal of which must be prohibited or strictly limited, the Convention offers a general definition of the injury that the disposal of substances not listed in part I may cause to another State. Hence there is *no* reference to specific substances, but only a general reference to injury.

121. Article 9 of the Convention provides for consultations when pollution from land-based sources originating in the territory of a contracting party by substances not listed in part I of annex A is likely to *prejudice the interests* of one or more other parties to the Convention. The reference to potential injury, requiring consultation, should be noted:

#### Article 9

1. When pollution from land-based sources originating from the territory of a Contracting Party by substances not listed in part I of annex A to the present Convention is likely to prejudice the interests of one or more of the other Parties to the present Convention, the Contracting Parties concerned undertake to enter into *consultation*,\* at the request of any one of them, with a view to negotiating a co-operation agreement.

2. At the request of any Contracting Party concerned, the Commission referred to in article 15 of the present Convention shall consider the question and may make recommendations with a view to reaching a satisfactory solution.

3. The special agreements specified in paragraph 1 of this article may, among other things, define the areas to which they shall apply, the quality objectives to be achieved, and the methods for achieving these objectives including methods for the application of appropriate standards, and the scientific and technical information to be collected.

4. The Contracting Parties signatory to these special agreements shall, through the medium of the Commission, inform the other Contracting Parties of their purport and of the progress made in putting them into effect.

122. Similarly, the 1974 Convention on the Protection of the Marine Environment of the Baltic Sea Area provides a list of hazardous substances in annex I and of noxious substances and materials in annex II, deposits of which are either prohibited or strictly limited:

#### Annex I

##### HAZARDOUS SUBSTANCES

The protection of the Baltic Sea area from pollution by the substances listed below can involve the use of appropriate technical means, prohibitions and regulations of the transport, trade, handling, application, and final deposition of products containing such substances.

1. DDT (1,1,1-trichloro-2,2-bis-(chlorophenyl)-ethane) and its derivatives DDE and DDD.
2. PCB's (polychlorinated biphenyls).

#### Annex II

##### NOXIOUS SUBSTANCES AND MATERIALS

The following substances and materials are listed for the purposes of article 6 of the present Convention.

The list is valid for substances and materials introduced as water-borne into the marine environment. The Contracting Parties shall also endeavour to use best practicable means to prevent harmful substances and materials from being introduced as airborne into the Baltic Sea area.

A. For urgent consideration

1. Mercury, cadmium, and their compounds.

B.

2. Antimony, arsenic, beryllium, chromium, copper, lead, molybdenum, nickel, selenium, tin, vanadium, zinc, and their compounds, as well as elemental phosphorus.
3. Phenols and their derivatives.
4. Phthalic acid and its derivatives.
5. Cyanides.
6. Persistent halogenated hydrocarbons.
7. Polycyclic aromatic hydrocarbons and their derivatives.
8. Persistent toxic organosilicic compounds.
9. Persistent pesticides, including organophosphoric and organostannic pesticides, herbicides, slimicides and chemicals used for the preservation of wood, timber, wood pulp, cellulose, paper, hides and textiles, not covered by the provisions of annex I of the present Convention.
10. Radioactive materials.
11. Acids, alkalis and surface active agents in high concentrations or big quantities.
12. Oil and wastes of petrochemical and other industries containing lipid-soluble substances.
13. Substances having adverse effects on the taste and/or smell of products for human consumption from the sea, or effects on taste, smell, colour, transparency or other characteristics of the water seriously reducing its amenity values.
14. Materials and substances which may float, remain in suspension or sink, and which may seriously interfere with any legitimate use of the sea.
15. Lignin substances contained in industrial waste waters.
16. The chelators EDTA (ethylenedinitrilotetraacetic acid or ethylenediaminetetraacetic acid) and DTPA (diethylenetriaminopentaacetic acid).

123. Annex III of the Convention lists goals, criteria and measures relating to the prevention of land-based pollution, and annex IV lays down the measures to be taken to eliminate or minimize pollution caused by ships. Appendices I to IV of annex IV list the different substances derived from oil. Appendix II contains guidelines for the classification of noxious liquid substances; appendix III lists noxious liquid substances carried in bulk; appendix IV lists other liquid substances carried in bulk. Annex V indicates the exceptions from the general prohibition of dumping of waste and other matter in the Baltic Sea area. These exceptions are as follows:

#### Annex V

##### EXCEPTIONS FROM THE GENERAL PROHIBITION OF DUMPING OF WASTE AND OTHER MATTER IN THE BALTIC SEA AREA

##### Regulation 1

In accordance with paragraph 2 of article 9 of the present Convention the prohibition of dumping shall not apply to the disposal at sea of dredged spoils provided that:

1. they do not contain significant quantities and concentrations of substances to be defined by the Commission and listed in annexes I and II of the present Convention; and

2. the dumping is carried out under a prior special permit given by the appropriate national authority, either

- (a) within the area of the territorial sea of the Contracting Party; or
- (b) outside the area of the territorial sea, whenever necessary, after prior consultations in the Commission.

When issuing such permits the Contracting Party shall comply with the provisions in regulation 3 of this annex.

#### Regulation 2

1. The appropriate national authority referred to in paragraph 2 of article 9 of the present Convention shall:

- (a) issue special permits provided for in regulation 1 of this annex;
- (b) keep records of the nature and quantities of matter permitted to be dumped and the location, time and method of dumping;
- (c) collect available information concerning the nature and quantities of matter that has been dumped in the Baltic Sea area recently and up to the coming into force of the present Convention, provided that the dumped matter in question could be liable to contaminate water or organisms in the Baltic Sea area, to be caught by fishing equipment, or otherwise to give rise to harm, and the location, time and method of such dumping.

2. The appropriate national authority shall issue special permits in accordance with regulation 1 of this annex in respect of matter intended for dumping in the Baltic Sea area:

- (a) loaded in its territory;
- (b) loaded by a vessel or aircraft registered in its territory or flying its flag, when the loading occurs in the territory of a State not party to the present Convention.

3. When issuing permits under subparagraph 1 (a) above, the appropriate national authority shall comply with regulation 3 of this annex, together with such additional criteria, measures and requirements as they may consider relevant.

4. Each Contracting Party shall report to the Commission, and where appropriate to other Contracting Parties, the information specified in subparagraph 1 (c) of regulation 2 of this annex. The procedure to be followed and the nature of such reports shall be determined by the Commission.

#### Regulation 3

When issuing special permits according to regulation 1 of this annex the appropriate national authority shall take into account:

1. Quantity of dredged spoils to be dumped.
2. The content of the matter referred to in annexes I and II of the present Convention.
3. Location (e.g. co-ordinates of the dumping area, depth and distance from coast) and its relation to areas of special interest (e.g. amenity areas, spawning, nursery and fishing areas, etc.).
4. Water characteristics, if dumping is carried out outside the territorial sea, consisting of:
  - (a) hydrographic properties (e.g. temperature, salinity, density, profile);
  - (b) chemical properties (e.g. pH, dissolved oxygen, nutrients);
  - (c) biological properties (e.g. primary production and benthic animals).

The data should include sufficient information on the annual mean levels and the seasonal variation of the properties mentioned in this paragraph.

5. The existence and effects of other dumping which may have been carried out in the dumping area.

#### Regulation 4

Reports made in accordance with paragraph 5 of article 9 of the present Convention shall include the following information:

1. Location of dumping, characteristics of dumped material, and counter measures taken:
  - (a) location (e.g. co-ordinates of the accidental dumping site, depth and distance from the coast);
  - (b) method of deposit;

(c) quantity and composition of dumped matter as well as its physical (e.g. solubility and density), chemical and biochemical (e.g. oxygen demand, nutrients), and biological properties (e.g. presence of viruses, bacteria, yeasts, parasites);

(d) toxicity;

(e) content of the substances referred to in annexes I and II of the present Convention;

(f) dispersal characteristics (e.g. effects of currents and wind, and horizontal transport and vertical mixing);

(g) water characteristics (e.g. temperature, pH, redox conditions, salinity and stratification);

(h) bottom characteristics (e.g. topography, geological characteristics and redox conditions);

(i) counter measures taken and follow-up operations carried out or planned.

2. General considerations and conditions:

(a) possible effects on amenities (e.g. floating or stranded material, turbidity, objectionable odour, discolouration and foaming);

(b) possible effect on marine life, fish and shellfish culture, fish stocks and fisheries, seaweed harvesting and cultures; and

(c) possible effects on other uses of the sea (e.g. impairment of water quality for industrial use, underwater corrosion of structures, interference with ship operations from floating materials, interference with fishing or navigation and protection of areas of special importance for scientific or conservation purposes).

The Convention allows exceptions from the general prohibition of the dumping of waste. It permits the dumping of some wastes under certain conditions, including prior negotiations with the Commission (regulation 1, para. 2 (b)), obtaining permission from the appropriate national authorities referred to in the Convention (regulation 2) and observing other detailed regulations concerning the *content* of the waste or the *amount* and *location of the dumping*. These requirements take into account the general interest of all the coastal States as well as the special interests of individual coastal States, and accommodate them by permitting the dumping of substances at locations where they cannot cause immediate tangible harm to another State.

124. The Protocol to the 1976 Convention for the Protection of the Mediterranean Sea against Pollution also lists the hazardous substances the dumping of which requires special care:

#### Annex II

The following wastes and other matter the dumping of which requires special care are listed for the purposes of article 5:

1. (i) Arsenic, lead, copper, zinc, beryllium, chromium, nickel, vanadium, selenium, antimony and their compounds;
- (ii) Cyanides and fluorides;
- (iii) Pesticides and their by-products not covered in annex I;
- (iv) Synthetic organic chemicals, other than those referred to in annex I, likely to produce harmful effects on marine organisms or to make edible marine organisms unpalatable.
2. (i) Acid and alkaline compounds the composition and quantity of which have not yet been determined in accordance with the procedure referred to in annex I, paragraph A. 8.
- (ii) Acid and alkaline compounds not covered by annex I, excluding compounds to be dumped in quantities below thresholds which shall be determined by the Parties in accordance with the procedure laid down in article 14, paragraph 3, of this Protocol.
3. Containers, scrap metal and other bulky wastes liable to sink to the sea bottom which may present a serious obstacle to fishing or navigation.
4. Substances which, though of a non-toxic nature, may become harmful owing to the quantities in which they are dumped, or which are liable to reduce amenities seriously or to endanger human life or marine organisms or to interfere with navigation.

5. Radioactive waste or other radioactive matter which will not be included in annex I. In the issue of permits for the dumping of this matter, the Parties should take full account of the recommendations of the competent international body in this field, at present the International Atomic Energy Agency.

125. Annex III of the Protocol lists the *factors* to be considered in establishing criteria governing the issue of permits for the dumping of matter at sea. They include the *quantity* of waste, the *site* of dumping, etc.:

#### Annex III

The factors to be considered in establishing criteria governing the issue of permits for the dumping of matter at sea taking into account article 7 include:

##### A. Characteristics and composition of the matter

1. Total amount and average compositions of matter dumped (e.g. per year).
2. Form (e.g. solid, sludge, liquid or gaseous).
3. Properties: physical (e.g. solubility and density), chemical and biochemical (e.g. oxygen demand, nutrients) and biological (e.g. presence of viruses, bacteria, yeasts, parasites).
4. Toxicity.
5. Persistence: physical, chemical and biological.
6. Accumulation and biotransformation in biological materials or sediments.
7. Susceptibility to physical, chemical and biochemical changes and interaction in the aquatic environment with other dissolved organic and inorganic materials.
8. Probability of production of taints or other changes reducing marketability of resources (fish, shellfish, etc.).

##### B. Characteristics of dumping site and method of deposit

1. Location (e.g. co-ordinates of the dumping area, depth and distance from the coast), location in relation to other areas (e.g. amenity areas, spawning, nursery and fishing areas and exploitable resources).
2. Rate of disposal per specific period (e.g. quantity per day, per week, per month).
3. Methods of packaging and containment, if any.
4. Initial dilution achieved by proposed method of release, particularly the speed of the ship.
5. Dispersal characteristics (e.g. effects of currents, tides and wind on horizontal transport and vertical mixing).
6. Water characteristics (e.g. temperature, pH, salinity, stratification, oxygen indices of pollution—dissolved oxygen (DO), chemical oxygen demand (COD), biochemical oxygen demand (BOD), nitrogen present in organic and mineral form, including ammonia, suspended matter, other nutrients and productivity).
7. Bottom characteristics (e.g. topography, geochemical and geological characteristics and biological productivity).
8. Existence and effects of other dumpings which have been made in the dumping area (e.g. heavy metal background reading and organic carbon content).
9. When issuing a permit for dumping, the Contracting Parties shall endeavour to determine whether an adequate scientific basis exists for assessing the consequences of such dumping in the area concerned, in accordance with the foregoing provisions and taking into account seasonal variations.

##### C. General considerations and conditions

1. Possible effects on amenities (e.g. presence of floating or stranded material, turbidity, objectionable odour, discolouration and foaming).
2. Possible effects on marine life, fish and shellfish culture, fish stocks and fisheries, seaweed harvesting and culture.
3. Possible effects on other uses of the sea (e.g. impairment of water quality for industrial use, underwater corrosion of structures, interference with ship operations from floating materials, interference with fishing or navigation through deposit of waste or solid objects on the sea floor and protection of areas of special importance for scientific or conservation purposes).

4. The practical availability of alternative land-based methods of treatment, disposal or elimination or of treatment to render the matter less harmful for sea dumping.

It should be noted that factors 2 and 3 in section C above relate to the *frustration of other uses* of the sea. Factor 4 relates to the possibility of employing alternative methods and bears on the question whether or not some harm should be tolerated in the absence of any other practical method of waste disposal.

126. The aforementioned conventions relate more to the protection of shared domains in which the harmful consequences to coastal States or to a third party may be least *direct, immediate* or *tangible*. Nevertheless, the conventions contain detailed instructions concerning the content and quantity of the substances that may be dumped, as well as concerning the balancing of the interests of the parties and the costs and benefits involved. Annex V of the Convention on the Protection of the Marine Environment of the Baltic Sea Area and annex III, section C, of the Protocol to the Convention for the Protection of the Mediterranean Sea against Pollution attempt to introduce *factors* to be taken into account in order to balance the interests of the parties as well as those of the general community. Similarly, article 194 of the 1982 United Nations Convention on the Law of the Sea calls upon States to take measures to minimize to the fullest possible extent the disposal of certain substances and certain other pollutant materials. Paragraph 3 of that article provides that such measures shall concern, in particular:

...

(a) the release of toxic, harmful or noxious substances, especially those which are persistent, from the land-based sources, from or through the atmosphere or by dumping;

(b) pollution from vessels, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, preventing intentional and unintentional discharges, and regulating the design, construction, equipment, operation and manning of vessels;

(c) pollution from installations and devices used in exploration or exploitation of the natural resources of the sea-bed and subsoil, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and regulating the design, construction, equipment, operation and manning of such installations or devices;

(d) pollution from other installations and devices operating in the marine environment, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and regulating the design, construction, equipment, operation and manning of such installations or devices.

4. In taking measures to prevent, reduce or control pollution of the marine environment, States shall refrain from unjustifiable interference with activities carried out by other States in the exercise of their rights and in pursuance of their duties in conformity with this Convention.

5. The measures taken in accordance with this part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

127. The 1976 Convention for the Protection of the Rhine against Chemical Pollution enumerates, in annex I, the substances whose discharge into the Rhine must be *eliminated* and, in annex II, those whose discharge must be *reduced*. The elimination or reduction of discharge of these substances is prescribed on the grounds that they may endanger the uses of the waters of the Rhine, specified as follows:



## Article 1

2. . . .

- (a) the production of drinking water for human consumption;
  - (b) consumption by domestic and wild animals;
  - (c) the conservation and development of the natural species of flora and fauna and the preservation of the self-purifying capacity of water;
  - (d) fishing;
  - (e) recreational purposes, bearing in mind hygienic and aesthetic requirements;
  - (f) the direct or indirect supply of fresh water to agricultural lands;
  - (g) the production of water for industrial purposes;
- and the need to preserve an acceptable quality of sea water.

128. Similar references to injury or harm are made in the 1973 International Convention for the Prevention of Pollution from Ships. The relevant provisions of article 2 are as follows:

## Article 2. Definitions

. . . .

(2) "Harmful substance" means any substance which, if introduced into the sea, is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea, and includes any substance subject to control by the present Convention.

(3) (a) "Discharge", in relation to harmful substances or effluents containing such substances, means any release howsoever caused from a ship and includes any escape, disposal, spilling, leaking, pumping, emitting or emptying.

. . . .

This article gives a broad definition of harm: it may include material or non-material injury to human health, injury to the living resources of the sea, as well as interference with the legitimate uses of the sea.

129. Article 1 of the 1979 Convention on Long-range Transboundary Air Pollution defines air pollution in terms of its effects:

## Article 1

For the purposes of the present Convention:

(a) "air pollution" means the introduction by man, directly or indirectly, of substances or energy into the air resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems and material property and impair or interfere with amenities and other legitimate uses of the environment, and "air pollutants" shall be construed accordingly;

. . . .

And in article 1, paragraph 6, of the 1969 Convention on Civil Liability for Oil Pollution Damage, "pollution damage" is defined as "loss or damage caused outside the ship carrying oil by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, and includes the costs of preventive measures and further loss or damage caused by preventive measures".

130. A general reference to *damage by pollution* is made in article 198 of the 1982 United Nations Convention on the Law of the Sea. The article requires a State which has become aware of an imminent danger of marine pollution to notify other States which might be affected by it:

## Article 198. Notification of imminent or actual damage

When a State becomes aware of cases in which the marine environment is in imminent danger of being damaged or has been damaged by pollution, it shall immediately notify other States it deems likely to be affected by such damage, as well as the competent international organizations.

Article 206 of the Convention refers to *substantial pollution* and to *significant and harmful changes to the marine environment*. This article requires the acting State to communicate reports on the assessment of activities under its jurisdiction when there are reasonable grounds that they may cause the injuries referred to above:

## Article 206. Assessment of potential effects of activities

When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.

131. Sometimes conventions enumerate or make general references to substances and activities that may frustrate certain other uses of the shared domain. For example, the 1968 European Agreement on the Restriction of the Use of Certain Detergents in Washing and Cleaning Products prohibits the use of certain products containing one or more synthetic detergents which, under conditions of normal use, might adversely affect *human or animal health*. The relevant articles read:

## Article 1

The Contracting Parties undertake to adopt measures as effective as possible in the light of the available techniques, including legislation if it is necessary to ensure that:

(a) in their respective territories, washing or cleaning products containing one or more synthetic detergents are not put on the market unless the detergents in the product considered are, as a whole, at least 80 per cent susceptible to biological degradation;

(b) the appropriate measurement and control procedures are implemented in their respective territories to guarantee compliance with the provisions of subparagraph (a) of this article.

## Article 2

Compliance with the provisions of paragraph (a) of article 1 of this Agreement must not result in the usage of detergents which, under conditions of normal use, might affect adversely human or animal health.

132. The 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties grants competence to coastal States to take action to prevent "major harmful consequences" to their coastlines resulting from oil pollution. Paragraph 1 of article I provides:

## Article I

1. Parties to the present Convention may take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil, following upon a maritime casualty or acts related to such a casualty, which may reasonably be expected to result in major harmful consequences.

. . . .

The term "major harmful consequences" is not defined in the Convention.

133. In at least one convention, a particular interest is accorded legal protection, and any activity frustrating that particular interest requires prior consultation and negotiation. Paragraph 3 of article 1 of the 1960 Convention on the Protection of Lake Constance against Pollution provides:

3. Specifically, the riparian States will mutually *notify*\* each other in advance of projects for water use which, if carried out, could interfere with the interests of another riparian State as regards maintaining the *wholesomeness*\* of the waters of Lake Constance. Such pro-



jects *shall not be carried out*\* until they have been jointly discussed by the riparian States, unless either there is danger in delay or the other States have explicitly agreed that they shall be put into effect immediately.

134. A different term for injury is used and a different method of consultation provided for in the 1974 Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden, article 1 of which describes environmentally harmful activities as those that entail environmental *nuisance*:

#### Article 1

For the purpose of this Convention, environmentally harmful activities shall mean the discharge from the soil or from buildings or installations of solid or liquid waste, gas or any other substance into watercourses, lakes or the sea and the use of land, the sea-bed, buildings or installations in any other way which entails, or may entail environmental *nuisance*\* by water pollution or any other effect on water conditions, sand drift, air pollution, noise, vibration, changes in temperature, ionizing radiation, light etc.

The Convention shall not apply in so far as environmentally harmful activities are regulated by a special agreement between two or more of the Contracting States.

The Protocol to the Convention expressly states that the discharges of waste mentioned in article 1 are to be regarded as environmentally harmful only if they entail or may entail a *nuisance* to the surroundings:

In the application of article 1, discharge from the soil, or from buildings or installations of solid or liquid waste, gases or other substances into watercourses, lakes or the sea shall be regarded as environmentally harmful activities only if the discharge entails or may entail a *nuisance*\* to the surroundings.

135. Article 3 of the Convention, without explicitly requiring prior negotiation, provides that any person who is affected or *may be* affected by a *nuisance* caused by environmentally harmful activities in another contracting State may bring before the appropriate authority of that State the question of the *permissibility* of such activities, including measures to prevent damage:

#### Article 3

Any person who is affected or may be affected by a nuisance caused by environmentally harmful activities in another Contracting State shall have the right to bring before the appropriate court or administrative authority of that State the question of the *permissibility*\* of such activities, including the question of *measures to prevent damage*,\* and to appeal against the decision of the court or the administrative authority to the same extent and on the same terms as a legal entity of the State in which the activities are being carried out.

The appropriate authority here is the court or the administrative authority of the acting State. Under article 3, the foreign claimant must receive the same treatment from the appropriate court or authorities of the acting State as would a national of that State.

#### (b) *Bilateral agreements*

136. In bilateral agreements, the definition of harm, for the purposes of prior negotiations, varies from a more exact to a more general characterization. For example, in the 1983 Agreement between the United States of America and Mexico,<sup>11</sup> article 2 makes a general reference to "pollution", and article 7, on assessment of projects, refers to *significant impacts on the environment*. In a number of bilateral agreements the terms "harm", "injury" or "damage" as such are not used.

Instead, reference is made to certain activities, changes in the nature of resources, impact upon material interests, etc. However, bilateral agreements that have a more specific object expressly refer to certain activities that must not be undertaken, or that may be undertaken only in consultation with the other party.

137. Some bilateral agreements provide that, for the commencement of certain activities, and of activities that may have repercussions, prior consultation is required with the other contracting party or with a joint commission. For example, the 1932 Convention between Poland and the Soviet Union relating to their common frontier<sup>12</sup> provides that the contracting parties may not, without the agreement of both parties, remove existing hydraulic installations on frontier waters if the level of the waters were to be changed thereby. Article 14, paragraph 1, of the Convention reads:

#### Article 14

1. The Contracting Parties agree that the presence and further utilization of existing hydraulic installations on frontier waters and on their banks shall not be hindered in any way. If the removal of such installations should involve a change in the *level of the water*,\* the necessary work shall *not*\* be undertaken without the agreement of the frontier authorities of both Contracting Parties.

...

138. In the 1931 General Convention between Romania and Yugoslavia concerning the hydraulic system,<sup>13</sup> reference is made to any alteration or any measure that might change to *an appreciable extent the hydraulic system in the basin*. Chapter I, article 3, of the Convention requires the contracting parties to notify each other if they intend to take any measures that might result in such changes. Such notice is a step towards a preliminary agreement between the parties, as provided for in article 292 of the Treaty of Trianon (see para. 106 above).

139. Article III of the 1909 Treaty relating to the boundary waters between Canada and the United States of America provides that the contracting parties shall not undertake activities, other than those prescribed in the Treaty, which may affect the *natural level or flow of boundary waters* on the other side of the line unless it is *agreed upon by at least one party and approved by the International Joint Commission*. Thus, under article IV, the contracting parties agree that, except in cases provided for by special agreement between them, they will not permit the construction or maintenance, on their respective territories, of any remedial or protective works or any dams or other obstructions in water flowing from boundary waters or in rivers flowing across the boundary which may *raise the natural level of waters* on the other side of the boundary, *unless it is done with the approval of the International Joint Commission*. Articles III and IV provide:

#### Article III

It is agreed that, in addition to the uses, obstructions and diversions heretofore permitted or hereafter provided for by special agreement between the Parties hereto, no further or other uses or obstructions or diversions, whether temporary or permanent, of boundary waters on either side of the line, affecting the natural level or flow of boundary

<sup>11</sup> See footnote 16 above.

<sup>12</sup> Convention of 10 April 1932 between Poland and the USSR concerning juridical relations on the State frontier.

<sup>13</sup> See footnote 60 above.

waters on the other side of the line, shall be made except by authority of the United States or the Dominion of Canada within their respective jurisdictions and with the approval, as hereinafter provided, of a joint commission, to be known as the International Joint Commission.

...

#### Article IV

The High Contracting Parties agree that, except in cases provided for by special agreement between them, they will not permit the construction or maintenance on their respective sides of the boundary of any remedial or protective works or any dams or other obstructions in waters flowing from boundary waters or in waters at a lower level than the boundary in rivers flowing across the boundary, the effect of which is to raise the natural level of waters on the other side of the boundary unless the construction or maintenance thereof is approved by the aforesaid International Joint Commission.

It is further agreed that the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other.

140. In its 1974 Agreement with Canada,<sup>44</sup> the United States of America, prior to launching two rockets from Canadian territory, assured Canada that, in the event of *loss of life, personal injury or damage or loss to property* resulting from those rocket launches, the United States Government would take all necessary measures to comply fully with its obligations under the 1967 Treaty on Principles governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, in particular article VII thereof, as well as under *international law*. Article VII of the Treaty does not specify the kinds of injury that may entail liability, whereas the Agreement between Canada and the United States refers to specific injuries. Moreover, article VII refers to the liability of both the launching State and the State *from whose territory* the rocket has been launched; in the Agreement, the United States alone assumes liability. The injuries referred to in the Agreement appear to be synonymous with "injuries that may entail liability".

141. Certain other bilateral agreements contain more general as well as some more specific references to injury. For example, the 1961 Treaty between the USSR and Poland<sup>45</sup> provides in article 29, paragraph 4, for notification of the outbreak of *forest fires* near the frontier. Again, in the 1958 Agreement between Czechoslovakia and Poland,<sup>46</sup> article 3 requires the consent of the other party for *any activity* that might affect its *water economy*, as well as certain specific uses of the waters shared by the parties. Article 3 reads:

#### Article 3

1. Neither Contracting Party may, without the consent of the other Contracting Party, carry out any works in frontier waters which may affect the latter Party's *water economy*.<sup>\*</sup>

2. The Contracting Parties shall come to agreement on the amount of water to be taken from frontier waters for domestic, industrial, power generation and agricultural requirements and on the discharge of waste water.

<sup>44</sup> Exchange of notes of 31 December 1974 between the United States of America and Canada constituting an agreement relating to liability for loss or damage from certain rocket launches.

<sup>45</sup> Treaty of 15 February 1961 between the USSR and Poland concerning the régime of the Soviet-Polish State frontier and co-operation and mutual assistance in frontier matters.

<sup>46</sup> Agreement of 21 March 1958 between Czechoslovakia and Poland concerning the use of water resources in frontier waters.

3. The Contracting Parties shall come to an agreement in each particular case on what runoff ratios are to be preserved in frontier waters.

4. The Contracting Parties have agreed to abate the pollution of frontier waters and to keep them clean to such extent as is specifically determined in each particular case in accordance with the economic and technical possibilities and requirements of the Contracting Parties.

5. When installations discharging polluted water into frontier waters are constructed or reconstructed, treatment of the waste water shall be required.

Article 3 of the 1922 Convention between Finland and the RSFSR prohibits, unless a special agreement has been concluded between the contracting States, the *diversion of water* from watercourses, the erection of constructions that may cause *damage*, the *alteration of the existing depth or conditions of parts of watercourses* situated in the territory of the other contracting State, or *encroachment upon channels used for navigation or timber-floating*.<sup>47</sup> Article 12 of the 1929 Convention between Norway and Sweden<sup>48</sup> requires the *approval* of both contracting parties of activities likely to entail any *considerable inconvenience* in the territory of one of them in the *use of a watercourse for navigation or floating*, to hinder the *movement of fish* or to disturb the conditions governing the *water supply* over an extensive area:

#### APPROVAL OF THE OTHER COUNTRY

##### Article 12

1. One country may not authorize an undertaking unless the other country has given its approval, if the undertaking is likely to involve any considerable inconvenience in the latter country in the use of a watercourse for navigation or floating or to hinder the movement of fish to the detriment of fishing in that country, or if the undertaking is likely to cause considerable disturbance in conditions governing the water supply over an extensive area.

2. If there is no reason to believe that the undertaking will produce the effects mentioned in paragraph 1 in the other country, that country cannot oppose the execution of the undertaking.

Article 13 of the same Convention provides that the *consent* of the potentially injured party is subject only to the *planning* of the work or the *prevention or reduction of public damage or nuisance*:

##### Article 13

If the other country's consent is necessary, the question shall be decided in accordance with the principles applicable to similar installations, works or operations under that country's laws, subject, however, to the provisions of articles 4 and 5. The consent may not be subjected to other conditions than those referring to the planning of the work or the prevention or reduction of public damage or nuisances.

142. Activities interfering with the *free discharge of waters*, changing the *quality of waters*, or causing *flood* in the territory of a contracting party may require the approval of a mixed commission. This is stipulated in article 2 of the 1955 Agreement between Yugoslavia and Romania concerning questions of water control at the frontier:<sup>49</sup>

<sup>47</sup> See footnote 27 above.

<sup>48</sup> See footnote 36 above.

<sup>49</sup> Agreement of 7 April 1955 between Yugoslavia and Romania concerning questions of water control on water control systems and watercourses on or intersected by the State frontier.

## Article 2

1. The two Contracting States undertake, each in its own territory and jointly on the frontier line, to maintain the beds and installations in good condition, and where necessary to improve their condition, and to keep the installations in operation on water control systems and watercourses and in valleys and depressions on or intersected by the State frontier.

2. The erection of any new installations and the execution of any new works, in the territory of either Contracting State, which may change the existing régime of the waters, interfere with the free discharge of the waters where it now exists, change the quality of the waters, or cause flooding on water control systems or watercourses or in valleys or depressions on or intersected by the State frontier shall be referred to the Mixed Commission for examination.

143. The 1967 Agreement between the Federal Republic of Germany and Austria<sup>90</sup> provides, in article 2, paragraph 2, concerning the hours of operation of the Salzburg Airport, that, before any extension of the hours of operation that might *adversely affect the interests of the Federal Republic of Germany* in respect of *safety, order or noise abatement*, the views of the competent German authorities must be ascertained. The paragraph reads:

2. If it is contemplated that the hours of operation of the Salzburg airport shall be extended to include periods between 11 p.m. and 6 a.m. local time, permission to change the existing hours of operation shall be granted only if German interests with respect to safety and order or aircraft noise abatement are not thereby affected. Before granting permission, the competent Austrian aeronautical authorities shall ascertain the views of the competent German aeronautical authorities.

Some bilateral agreements, without reference to injury, require the consent of both parties for certain uses of frontier waters. For example, article 6 of the 1934 Agreement between Belgium and Great Britain concerning water rights on the boundary between Tanganyika and Ruanda-Urundi<sup>91</sup> provides that, if either contracting party intends to *utilize the waters of their joint rivers* or to permit any person to utilize such waters for *irrigation purposes*, such contracting party shall give notice to the other party six months in advance, in order to permit the consideration of any objections which the other party may wish to raise:

## Article 6

In the event of either Contracting Government desiring to utilize the waters of any river or stream on the aforesaid boundary or to permit any person to utilize such water for irrigation purposes, such Contracting Government shall give to the other Contracting Government notice of such desire six months before commencing operations for the utilization of such waters, in order to permit of the consideration of any objections which the other Contracting Government may wish to raise.

144. Similarly, article 15 of the 1932 Convention between Poland and the Soviet Union<sup>92</sup> provides for *prior agreement* between the two Governments for the *erection on waters of new dikes and construction of new mills or other hydraulic installations*:

## Article 15

The erection on frontier waters of new dykes and the construction of new mills or other hydraulic installations shall in every case be sub-

ject to prior agreement between the competent authorities of the Contracting Parties.

145. Similarly, article 5 of the 1971 Act of Santiago concerning Hydrologic Basins, signed by Argentina and Chile, also requires prior notification of activities to be undertaken in their joint waters:

5. If a State intends to utilize a common lake or successive river, it shall first transmit to the other State the plans for the works, the plan of operations and other data which may be useful in determining the impact of the works in the territory of the neighbouring State.

Under the 1949 Agreement between Norway and the USSR,<sup>93</sup> the exploitation of mineral deposits near the frontier area requires the consent of the other party. Article 18, paragraph 2, refers to the safeguarding of the *frontier line* and requires a 20 metre-wide space on either side of the borderline within which exploration of mineral resources may not be undertaken, except with the consent of both parties (see para. 44 above). It should be noted that the reference to harm in paragraph 1 of this article is general and undefined.

146. In at least one bilateral agreement, the concept of harm, injury or damage is defined by reference to a standard stipulated in a multilateral convention. Article 12 of the 1970 Treaty between Liberia and the Federal Republic of Germany concerning the use of Liberian ports by the nuclear ship *Otto Hahn*<sup>94</sup> provides that terms such as "nuclear damage" have the same meaning as in the 1962 Convention on the Liability of Operators of Nuclear Ships:

## Article 12

The terms "nuclear damage", "nuclear incident", "nuclear fuel" and "radioactive products or waste" as used in articles 13-20 of this Treaty shall have the same meaning as in the Convention on the Liability of Operators of Nuclear Ships opened for signature in Brussels on May 25, 1962, hereinafter referred to as "the Convention".

Thus the definition of "nuclear injury", as agreed between the parties, is established in accordance with an international standard.

147. By contrast, two other bilateral agreements refer to domestic law standards for injuries. The United States of America, in two agreements, one concluded with the Netherlands, in 1963,<sup>95</sup> the other with Ireland, in 1964,<sup>96</sup> concerning visits of the N.S. *Savannah* to the ports of those countries, accepted "liability" for any "nuclear incident", as those terms are defined in section 11 of the United States Atomic Energy Act of 1954, as amended.<sup>97</sup> This provision refers to domestic law. It should be noted that, in the above agreements, injury, for the purposes of prior negotiation, means injury entailing liability.

148. In a few bilateral agreements, references to harm or injury are general and rather abstract. For example, article 2 of the 1956 Treaty between Hungary and Austria<sup>98</sup> provides that activities that may cause injury are subject to prior notification and consultation, with

<sup>90</sup> See footnote 18 above.

<sup>91</sup> Agreement of 22 November 1934 between Belgium and Great Britain regarding water rights on the boundary between Tanganyika and Ruanda-Urundi.

<sup>92</sup> See footnote 82 above.

<sup>93</sup> See footnote 17 above.

<sup>94</sup> See footnote 19 above.

<sup>95</sup> See footnote 22 above.

<sup>96</sup> See footnote 21 above.

<sup>97</sup> *United States Code*, title 42, section 2014 q (Definitions).

no further specification; the contracting parties are prohibited from taking any *unilateral* action or from carrying out, *without the consent* of the other party, any measures or works on the frontier waters that would *adversely affect water conditions* in the territory of the other contracting State. Article 2, paragraph 1, provides:

*Article 2. General obligations*

1. Each Contracting Party undertakes to refrain from unilaterally—without the consent of the other Contracting Party—carrying out any measures or works on frontier waters (article 1, subparagraph 1) which would adversely affect water conditions in the territory of the other Contracting Party. Consent may be refused only if the grounds for such refusal are duly set forth.

149. Again, article 4 of the 1954 Convention between Yugoslavia and Austria concerning water economy questions relating to the Drava requires the Austrian Government to negotiate with the Yugoslav Government if it contemplates plans for new installations that would *divert water* from the Drava basin or for construction work that might be *detrimental* to Yugoslavia. The Convention does not define the term “detriment”. The article reads in part:

*Article 4*

Should the Austrian authorities seriously contemplate plans for new installations to divert water from the Drava basin or for construction work which might affect the Drava river régime to the detriment of Yugoslavia, the Austrian Federal Government undertakes to discuss such plans with the Federal People's Republic of Yugoslavia prior to legal negotiations concerning rights in the water.

150. In the 1928 Convention between Hungary and Czechoslovakia,<sup>99</sup> the parties agree not to allow any works calculated to *disturb the flow of the water* or the regulation of frontier watercourses. Paragraph 2 (c) of article 26 of the Convention provides:

(c) The Contracting Parties shall not allow any works calculated to disturb the flow of the water or the regularization of frontier watercourses. If works contemplated are likely to have an undesirable effect on the bed of frontier watercourses, the competent technical department of the other Party must be consulted.

Under the 1960 Treaty between the Netherlands and the Federal Republic of Germany,<sup>100</sup> the contracting party which intends to take measures that may *substantially affect the use and management of water resources* in the territory of the other contracting party must notify the Permanent Boundary Waters Commission. Article 60 of the Treaty reads:

*Article 60*

1. If it is intended to carry into effect, within the territory of one of the Contracting Parties, any measures which may substantially affect the use and management of water resources in the territory of the other Contracting Party, or to allow such measures to be carried into

effect, the Permanent Boundary Waters Commission shall be notified thereof as soon as possible.

2. The Contracting Parties shall notify each other of the authorities or corporations within its territory which are competent to make the notification referred to in paragraph 1.

(c) *Judicial decisions and State practice other than agreements*

151. Most judicial decisions, when referring to harm for purposes of consultation and negotiation, do so in very general terms as of something that affects human life and changes the quality of a shared resource, such as sea water or land-based resources, or the quality of a resource within the exclusive jurisdiction of the injured State, such as land, agriculture or even population. These decisions refer to many hazardous substances which, when introduced into the shared domain or into the territory of another State, would have such effects. In most cases, harm has been considered as interference with or denial of an interest resulting from activities conducted by the acting State in its own territory or within the shared domain.

152. There are references to harm in the 1957 arbitral award in the *Lake Lanoux* case and in the judgment rendered by the International Court of Justice on 19 April 1949 in the *Corfu Channel* case (*merits*). In the former case, the tribunal referred to the duty of safeguarding the *interests* of the parties to a treaty, and stated that those *interests went beyond specific legal rights*. That statement may be interpreted as meaning that the tribunal also considered the safeguarding of *interests not legally protected*. In the opinion of the tribunal, then, States could not *unilaterally* determine and evaluate the interests of another State in regard to an international watercourse (see para. 109 above). In the *Corfu Channel* case, the Court's ruling emphasized a different aspect. The Court stated that Albania had the obligation “not to allow knowingly its territory to be used for acts *contrary to the rights of other States*”.<sup>101</sup> The *rights* here may be interpreted as only “legally protected interests”; it is a narrower concept than that of *interests* as stated in the *Lake Lanoux* award. The different emphasis placed by the tribunal and the Court on *interests* to be protected may be explained by the following factors: first, the location of the activities, involving different *competing interests* and principles of varying degrees of importance. In the *Corfu Channel* case, the activity occurred in an international channel located within the territorial jurisdiction of the acting State. Certain rights of passage, similar to an international servitude, have been recognized for other States with respect to the use of another State's territory. In this case, it was the right of innocent passage. Hence the coastal State was not, it seems, obliged to consult, negotiate or notify other States exercising innocent passage with regard to activities or conditions that did not affect their right of innocent passage. By contrast, the *Lake Lanoux* decision dealt with a watercourse in which more than one State had territorial sovereignty. Thus it was not a matter of mere servitude. In addition to the principle of territorial sovereignty, there is a principle of good neighbour-

<sup>99</sup> Treaty of 9 April 1956 between Hungary and Austria concerning the regulation of water economy questions in the frontier region.

<sup>99</sup> Convention of 14 November 1928 between Hungary and Czechoslovakia relating to the settlement of questions arising out of the delimitation of the frontier between the two countries (Frontier Statute).

<sup>100</sup> Treaty of 8 April 1960 between the Netherlands and the Federal Republic of Germany concerning the course of the common frontier, the boundary waters, real property situated near the frontier, traffic crossing the frontier on land and via inland waters, and other frontier questions (Frontier Treaty).

<sup>101</sup> *I.C.J. Reports 1949*, p. 22.

liness, which entails different expectations of behaviour between neighbouring States. The second factor is that the Court in the *Corfu Channel* case may have been contemplating activities causing injuries that are not to be tolerated *per se*, such as the frustration of another State's rights, whereas the tribunal in the *Lake Lanoux* case was dealing with injuries which may be tolerated, but only by consent.

153. A number of judicial decisions and instances of State practice relate to material injury. Most often this type of injury is of an economic nature or entails injury to human well-being. Material injury may occur to another State's interests either within the shared domain or within the area under the exclusive territorial control of the injured State. In the *Trail Smelter* case, the tribunal formulated the concept of injury in very broad terms (see para. 47 above).

154. In equally broad terms, the Italian Court of Cassation stated, in the *Société d'énergie électrique du littoral méditerranéen v. Compagnia imprese elettriche liguri* case (1939) [hereinafter referred to as the *Roya case*]:<sup>102</sup>

... although a State, in the exercise of its rights of sovereignty, may subject public rivers to whatever régime it deems best, it cannot disregard the international duty, derived from that principle, not to impede or to destroy, as a result of this régime, the *opportunity*\* of the other States to avail themselves of the flow of water for their own national needs.

According to this decision, the *frustration or destruction* of other States' opportunities is *prohibited*. Although many judicial decisions refer to material injury in broad, general and undefined terms as some type

of injury to interests, in most cases they focus on a particular injury to a particular interest.

155. In the *Fisheries Jurisdiction* cases, the International Court of Justice held that Iceland might not *unilaterally* extend its exclusive fishing rights beyond its *territorial* waters where such extension would harm the *economic interests* of other States. The Court pointed to *unemployment in the fishing and related industries* as specific injuries resulting from the unilateral determination:

64. The Applicant further states that in view of the present situation of fisheries in the North Atlantic, which has demanded the establishment of agreed catch-limitations of cod and haddock in various areas, it would not be possible for the fishing effort of United Kingdom vessels displaced from the Icelandic area to be diverted at economic levels to other fishing grounds in the North Atlantic. Given the lack of alternative fishing opportunity, it is further contended, the exclusion of British fishing vessels from the Icelandic area would have very serious adverse consequences, with immediate results for the affected vessels and with damage extending over a wide range of supporting and related industries. It is pointed out in particular that widespread unemployment would be caused among all sections of the British fishing industry and in ancillary industries and that certain ports—Hull, Grimsby and Fleetwood—specially reliant on fishing in the Icelandic area, would be seriously affected.<sup>103</sup>

The United Kingdom's *economic interests* receiving protection were *historically based*:

63. In this case, the Applicant has pointed out that its vessels have been fishing in Icelandic waters for centuries and that they have done so in a manner comparable with their present activities for upwards of 50 years. Published statistics indicate that from 1920 onwards, fishing of demersal species by United Kingdom vessels in the disputed area has taken place on a continuous basis from year to year, and that, except for the period of the Second World War, the total catch of those vessels has been remarkably steady. Similar statistics indicate that the waters in question constitute the most important of the Applicant's distant-water fishing grounds for demersal species.<sup>104</sup>

This passage may be interpreted as meaning that the Court in this context was referring to the *legally protected economic interests* of the United Kingdom, *interests that had acquired legal protection based on history*. A different interpretation may also be given. References by the Court to historic use by the United Kingdom may have been intended only to establish a *fact*: the real and genuine dependence of the United Kingdom on fishing in the area where Iceland was imposing its unilateral prescription. The Court may not have been concerned about whether the United Kingdom's dependence on fishing resources was legally protected or not. The Court at the same time noted that the *rights and interests* of the States were *not static concepts*, but changed with *changing economic dependence on the resource*:

70. This is not to say that the preferential rights of a coastal State in a special situation are a static concept, in the sense that the degree of the coastal State's preference is to be considered as fixed for ever at some given moment. On the contrary, the preferential rights are a function of the exceptional dependence of such a coastal State on the fisheries in adjacent waters and may, therefore, vary as the extent of that dependence changes. Furthermore, as was expressly recognized in the 1961 Exchange of Notes, a coastal State's exceptional dependence on fisheries may relate not only to the livelihood of its people but to its economic development. In each case, it is essentially a matter of appraising the dependence of the coastal State on the fisheries in ques-

<sup>102</sup> *Il Foro italiano* (Rome), vol. 64, 1939, part I, col. 1036. The following is a summary of the facts of this case:

"On December 17, 1914, a Convention was concluded in Paris between France and Italy for the regulation in the common interest of the utilization of the waters of the river Roya which flows partly in Italy and partly in France. Article 1 of the Convention provided that the High Contracting Parties will reciprocally refrain from using or from permitting the use of the hydraulic power of the Roya and of its tributaries within the territory subject to their exclusive sovereignty in any manner which might lead to a noticeable modification of the existing régime and of the natural flow of the water in the territory of the lower riparian State. Articles 2 and 3 dealt with the rights of the Contracting Parties in respect of the waters of the Roya where the river formed the common frontier. Article 4 entrusted a permanent international commission consisting of delegates of the two Contracting Parties with the application of the principles laid down in the Convention. Article 5 maintained, as between the two Governments, the agreements reached and obligations incurred by the private users in France and Italy of the water power of the Roya. In substance, article 5 referred to an agreement of February 11, 1914, between the plaintiffs and the defendants which created a *modus vivendi* to the effect that the defendants promised not to interfere with the waters of the Roya in a manner which might affect the plaintiffs and to remove the effects of interferences in the past. Subsequently, the defendants created new power-stations and plants on Italian territory which, it was alleged, adversely affected the plaintiffs. As a result, the plaintiffs claimed damages for breach of contract in the Court of Nice (France) and obtained judgment in their favour. This decision was affirmed by the Court of Appeal of Aix and by the French Court of Cassation. The plaintiffs now brought an action in the Court of Appeal of Genoa to have the French judgment rendered executory in Italy in accordance with the Franco-Italian Convention of June 3, 1930, for the execution of judgments in commercial matters." (*Annual Digest and Reports of Public International Law Cases, 1938-1940* (London, 1942), vol. 9, case No. 47, p. 121.)

<sup>103</sup> *I.C.J. Reports* 1974, p. 28.

<sup>104</sup> *Ibid.*

tion in relation to that of the other State concerned and of reconciling them in as equitable a manner as is possible.<sup>105</sup>

The Court requested the parties to negotiate.

156. Harm, for purposes of impact assessment, must be more than a mere change in the natural situation of resources. Many variables have been taken into account to determine what constitutes harm. The most important, it seems, is that there must be some *value deprivation for human beings*. In the *Lake Lanoux* case, the tribunal, discussing the diversion of international waters from one river basin to the next and in response to Spain's claim that any diversion of international waters was, *per se*, an injury to Spanish interests, noted that the mere withdrawal of water was insufficient to base a claim for injury:

8. The prohibition of compensation between the two basins, in spite of equivalence between the water diverted and the water restored, unless the withdrawal of water is agreed to by the other Party, would lead to the prevention in a general way of a withdrawal from a water-course belonging to River Basin A for the benefit of River Basin B, even if this withdrawal is compensated for by a strictly equivalent restitution effected from a watercourse of River Basin B for the benefit of River Basin A. The Tribunal does not overlook the reality, from the point of view of physical geography, of each river basin, which constitutes, as the Spanish Memorial (at p. 53) maintains, "a unit". But this observation does not authorize the absolute consequences that the Spanish argument would draw from it. The unity of a basin is sanctioned at the juridical level only to the extent that it corresponds to human realities. *The water which by nature constitutes a fungible item may be the object of a restitution which does not change its qualities in regard to human needs. A diversion with restitution, such as that envisaged by the French project, does not change a state of affairs organized for the working of the requirements of social life.\**

The state of modern technology leads to more and more frequent justifications of the fact that waters used for the production of electric energy should not be returned to their natural course. Water is taken higher and higher up and it is carried even farther, and in so doing it is sometimes diverted to another river basin, in the same State or in another country within the same federation, or even in a third State. Within federations, the judicial decisions have recognized the validity of this last practice (*Wyoming v. Colorado, United States Reports*, vol. 259, p. 419) and the instances cited by F. J. Berber, *Die Rechtsquellen des internationalen Wassernutzungsrechts*, p. 180, and by G. Sauser Hall, "L'utilisation industrielle des fleuves internationaux". *Recueil des cours de l'Académie de droit international de La Haye*, 1953-II, vol. 83, p. 544; for Switzerland, *Recueil officiel des arrêts du Tribunal fédéral*, vol. IV, pp. 14 et seq.<sup>106</sup>

Nor is it sufficient, as Spain claimed, that the activity may place into the hands of the acting State an instrument giving it a means of violating its international pledges. The tribunal stated:

... But we must go still further; the growing ascendancy of man over the forces and the secrets of nature has put into his hands instruments which he can use to violate his pledges just as much as for the common good of all; the risk of an evil use has so far not led to subjecting the possession of these means of action to the authorization of the States which may possibly be threatened. Even if we took our stand solely on the ground of neighbourly relations, the political risk alleged by the Spanish Government would not present a more abnormal character than the technical risk which was discussed above. In any case, we do not find either in the Treaty and the Additional Act of May 26, 1866, or in international common law, any rule that forbids one State, acting to safeguard its legitimate interests, to put itself in a situation which would in fact permit it, in violation of its international pledges, seriously to injure a neighbouring State.<sup>107</sup>

157. The tribunal noted, in addition, that not only might the utilization of international waters by one riparian State not be harmful to the other, but that the utilization might indeed be beneficial to the latter. Not only had France not diverted any of Spain's waters to its own uses without restitution, but French use had also stabilized and equalized the annual water flow:

... Thus, if it is admitted that there is a principle which prohibits the upstream State from altering the waters of a river in such a fashion as seriously to prejudice the downstream State, such a principle would have no application to the present case, because it has been admitted by the Tribunal, in connection with the first question examined above, that the French scheme will not alter the waters of the Carol. . . .<sup>108</sup>

6. In effect, thanks to the restitution effected by the devices described above, none of the guaranteed users will suffer in his enjoyment of the waters (this is not the subject of any claim founded on article 9); at the lowest water level, the volume of the surplus waters of the Carol, at the boundary, will at no time suffer a diminution; it may even, by virtue of the minimum guarantee given by France, benefit by an increase in volume assured by the waters of the Ariège flowing naturally to the Atlantic.<sup>109</sup>

158. The tribunal in fact stated that the claims formulated by Spain *could not be proved to have caused injuries*. It added that *pollution, increased temperature, changed chemical composition* of the waters or *inability to make restitution of water* could be considered *injuries* for the purpose of prior negotiation, and stated that Spain should have argued its position in terms of the actual injuries which might be caused by the French project:

It could have been argued that the works would bring about an ultimate pollution of the waters of the Carol or that the returned waters would have a chemical composition or a temperature or some other characteristic which could injure Spanish interests. Spain could then have claimed that her rights had been impaired in violation of the Additional Act. Neither in the *dossier* nor in the pleadings in this case is there any trace of such an allegation.

It could also have been claimed that, by their technical character, the works envisaged by the French project could not in effect ensure the restitution of a volume of water corresponding to the natural contribution of the Lanoux to the Carol, either because of defects in measuring instruments or in mechanical devices to be used in making the restitution. The question was lightly touched upon in the Spanish Counter Memorial (p. 86), which underlined the "extraordinary complexity" of procedures for control, their "very onerous" character, and the "risk of damage or of negligence in the handling of the watergates, and of obstruction in the tunnel". But it has never been alleged that the works envisaged present any other character or would entail any other risks than other works of the same kind which today are found all over the world. It has not been clearly affirmed that the proposed works would entail an abnormal risk in neighbourly relations or in the utilization of the waters. As we have seen above, the technical guarantees for the restitution of the waters are as satisfactory as possible. If, despite the precautions that have been taken, the restitution of the waters were to suffer from an accident, such an accident would be only occasional and, according to the two Parties, would not constitute a violation of article 9.<sup>110</sup>

It is not quite clear whether injuries to "Spanish interests" are meant to apply only to *material injuries*. But from examples given by the tribunal, i.e. *pollution, chemical composition, temperature*, etc., it may be deduced that certain material changes with the potential to cause injuries, whether or not material, may be sufficient to constitute harm for purposes of prior negotiations.

<sup>105</sup> *Ibid.*, p. 30.

<sup>106</sup> *International Law Reports 1957* (see footnote 67 above), pp. 124-125.

<sup>107</sup> *Ibid.*, p. 126 (para. 9 of the award).

<sup>108</sup> *Ibid.*, p. 129 (para. 13 of the award).

<sup>109</sup> *Ibid.*, p. 123.

<sup>110</sup> *Ibid.*, pp. 123-124 (para. 6 of the award).

159. Similarly, in the *Kansas v. Colorado* case (1902), the United States Supreme Court noted that utilization of the great rivers by the upper riparian might lead to injury to the lower riparian as defined under international law. The Supreme Court set the principle in a suit brought by Kansas seeking to enjoin Colorado from *diverting waters* from a shared river. Implicitly, the Supreme Court recognized that the diversion would cause harm to Kansas. Kansas had averred that:

... the State of Colorado, acting directly herself, as well as through private persons thereto licensed, is depriving and threatening to deprive the State of Kansas and its inhabitants of all the water heretofore accustomed to flow in the Arkansas River through its channel on the surface, and through a subterranean course, across the State of Kansas; that this is threatened not only by the impounding, and the use of the water at the river's source, but as it flows after reaching the river . . . The injury is asserted to be threatened, and as being wrought, in respect of lands . . . And it is insisted that Colorado in doing this is violating the fundamental principle that one must use his own so as not to destroy the legal rights of another.<sup>111</sup>

The Supreme Court found the *averments* sufficient to raise the question of injury:

Without subjecting the bill to minute criticism, we think its *averments sufficient to present the question as to the power of one State of the Union to wholly deprive another of the benefit of water from a river rising in the former\** and, by nature, flowing into and through the latter, and that, therefore, this court, speaking broadly, has jurisdiction.<sup>112</sup>

160. The German Constitutional Court, rendering a provisional decision concerning the flow of the waters of the Danube in the *Donauversinkung* case (1927),<sup>113</sup> stated that “only *considerable interference\** with the natural flow of international rivers can form the basis for claims under international law”. The Court stated further that Württemberg was required “to refrain from *such interference\** with the natural distribution of water as damages the interests of Baden to any considerable extent”<sup>114</sup>.

161. In the *Georgia v. Tennessee Copper Co.* case (1907), in which the State of Georgia had instituted an action against a private company, seeking to restrain it from discharging noxious gas, the United States Supreme Court stated:

It is a fair and reasonable demand on the part of a sovereign that the air over its territory should not be polluted on a *great scale* by sulphurous acid gas, that the forests on its mountains, be they better or worse, and whatever domestic destruction they have suffered, should not be further destroyed or threatened by the act of persons beyond its control, that the crops and orchards on its hills should not be endangered from the same source. . . .<sup>114</sup>

The Supreme Court considered that the defendant had so far shown “due diligence” in making efforts to prevent the discharge of noxious gas, but that preventive measures had proved to be ineffective and that the defendant must take different measures. Citing damage to “forests and vegetable life, if not to health, within the plaintiff State” the Court held that, if after allowing a reasonable time to the defendants to complete the structures, the fumes were not controlled, an injunction would be issued.

162. The pollution of waters through discharge of sewage was also recognized by the Supreme Court in the *Missouri v. Illinois* case (1906) as an injury inflicted unilaterally. In that case, Missouri had alleged that:

... the result of the threatened discharge would be to send fifteen hundred tons of poisonous filth daily into the Mississippi, to deposit great quantities of the same upon the part of the bed of the last-named river belonging to the plaintiff, and so to poison the water of that river, upon which various of the plaintiff's cities, towns and inhabitants depended, as to make it unfit for drinking, agricultural, or manufacturing purposes. . . .<sup>115</sup>

The Supreme Court found the complaint to pose a question of the “first magnitude”, namely, “whether the destiny of the great rivers is to be the sewers of the cities along their banks or *to be protected against everything which threatens their purity\**”.<sup>116</sup> However, the Court also noted, as would the arbitrators in the *Lake Lanoux* case, that the activity actually benefited rather than injured the target State:

We have studied the plaintiff's statement of the facts in detail and have perused the evidence, but it is unnecessary for the purposes of decision to do more than give the general result in a very simple way. At the outset we cannot but be struck by the consideration that if this suit had been brought fifty years ago it almost necessarily would have failed. There is no pretence that there is a nuisance of the simple kind that was known to the older common law. There is nothing which can be detected by the unassisted senses—no visible increase of filth, no new smell. On the contrary, it is proved that the great volume of pure water from Lake Michigan which is mixed with the sewage at the start has improved the Illinois River in these respects to a noticeable extent. Formerly it was sluggish and ill smelling. Now it is a comparatively clear stream to which edible fish have returned. Its water is drunk by the fishermen, it is said, without evil results. . . .<sup>116</sup>

Thus the pollution of shared resources *without detriment to the quality of human life or economic interests* does not appear to give rise to the duty to negotiate to seek ways to prevent or to minimize injuries.

163. Potential accidental injury has been the subject of prior negotiation between States in the past. For example, in connection with the construction by Mexico of a highway crossing the *Smugglers* and *Goat Canyons*, close to the United States border, the United States of America had observed that the road constructed on Mexican territory would not withstand torrential rains, and had requested that negotiations commence between the two States to *determine the impact of the construction and to develop remedial plans*. Writing to the Mexican Commissioner on the International Boundary and Water Commission on 20 May 1957, the United States Commissioner stated:

... it was observed that the highway construction in Mexico extending west from the city of Tijuana and parallel to the boundary, crosses two canyons draining northward into the United States . . . and that the crossing over the first canyon, referred to as “Smugglers Canyon”, is being made by an earth fill already up to 60 feet in height without culverts, and that it is understood that the plans for crossing over the second canyon, referred to as “Goat Canyon”, provide for similar construction.

This construction which appears in effect to comprise earth dams across the two canyons without outlet works or spillways, and apparently without impervious cores and therefore subject to failure, could result in flows at the mouths of the canyons at rates greatly exceeding those of natural flows. At the mouths of the canyons in the United States there are residences and properties which would be seriously damaged by such flows.

<sup>111</sup> *United States Reports*, vol. 185, pp. 145-146.

<sup>112</sup> *Ibid.*, p. 145.

<sup>113</sup> See footnote 13 above.

<sup>114</sup> *United States Reports*, vol. 206, p. 238.

<sup>115</sup> *Ibid.*, vol. 200, p. 517.

<sup>116</sup> *Ibid.*, p. 522.



In view of the aforescribed situation, I will appreciate an examination of the problem by your Section, and, if the conditions found are as reported to me, that appropriate arrangements be made with the proper authorities in Mexico to take such remedial measures as required to eliminate this threat to interests in my country.<sup>117</sup>

In a note addressed in July 1959 to the Mexican Minister of Foreign Relations, the United States Ambassador to Mexico stated that, in the opinion of the United States Government engineers who were very familiar with the construction, the embankment at Goat Canyon would fail in certain circumstances of flood and that the subsequent modifications by the Mexicans to remedy that problem were not sufficient to ensure its security. The United States therefore urged Mexico to take appropriate steps to prevent the *damage to property* and the *injury to persons* that were likely to result from the improper construction of the highway.<sup>118</sup>

164. Similarly, a Mexican-United States Commission for the *Eradication of Foot-and-Mouth Disease* had been established in 1947 at the initiative of the United States in response to the perceived threat of potential injury arising to United States livestock and agriculture from a possible introduction of that disease from Mexico. The Commission's task was to carry out "operations or measures to eradicate, suppress, or control, or to prevent or retard, foot-and-mouth disease, rinderpest, or screw-worm in Mexico" where, it was deemed, such action was necessary to protect the livestock and related industries of the United States.<sup>119</sup> The Commission comprised an equal number of representatives of each country; Mexico and the United States jointly provided the funds for the operation.

165. *Lost future interest* has also been recognized as an injury which may give rise to impact assessment. Judge Jessup, in his separate opinion in the *North Sea Continental Shelf* cases, emphasized that harm possibly resulting from delimitation of the continental shelf and mitigated by the majority decision *extended beyond direct, immediate and physical harm to indirect, possible and future harm*. Judge Jessup referred not only to *wasteful or harmful methods of extraction* as a basis for negotiation, but also to *lost opportunities to exploit resources* which might be found in the future, to *money wasted* in exploratory investigations in areas destined to fall under another State's territorial control and to *revenues lost* by lack of authority to issue concessionary licences. Those revenues included:

... national revenue to be derived from fees, taxes, royalties or profit-sharing, with increases in national productivity, and also with the impact on the national balance of payments if imports of fuels to meet domestic needs are eliminated or reduced by the production of natural gas in the State's portion of the continental shelf.<sup>120</sup>

166. In the *Nuclear Tests* case, Australia claimed that account be taken of non-material injury. The claims formulated by the Government of Australia were:

(i) The right of Australia and its people, in common with other States and their peoples, to be free from atmospheric nuclear weapon tests by any country is and will be violated;

(ii) The deposit of radioactive fallout on the territory of Australia's airspace without Australia's consent;

(a) violates Australian sovereignty over its territory;

(b) impairs Australia's independent right to determine what acts shall take place within its territory and in particular whether Australia and its people shall be exposed to radiation from artificial sources;

(iii) The interference with ships and aircraft on the high seas and in the superjacent airspace, and the pollution of the high seas by radioactive fallout, constitute infringements of the freedom of the high seas.<sup>121</sup>

Additionally, the Government of Australia alleged that the French nuclear explosions had caused radioactive fallout on Australian territory and elsewhere in the southern hemisphere and had given rise to considerable concentrations of radioactive substances in foodstuffs and in man. Thus the radioactive substances deposited on Australia were *potentially* dangerous to that country and its peoples and any *injury* caused thereby would be *irreparable*. Australia further claimed that the tests created *anxiety* and *concern* among the Australian people and that any effects of the French tests upon the *resources of the sea* or the *conditions of the environment* could never be undone and would be *irremediable* by any *payment of damages*.<sup>122</sup> In its interim measures order in the *Nuclear Tests* case, the Court declined to exclude the possibility that damage to Australia might be shown to be caused by the deposit on Australian territory of radioactive fallout resulting from such tests. The issue in that case, however, was whether France was allowed to conduct nuclear testing in the atmosphere. Hence the question of prior consent was not even raised.

167. Harm is referred to in State practice in a variety of forms, such as material injury, frustration or deprivation of some legally protected interests, nuisance or the deposit of certain substances, and in most cases by a general reference to the term "damage" itself. In bilateral agreements and a few judicial decisions, references to harm are more precise than in multilateral agreements. This may be due to the more specific subject matter of bilateral agreements and of disputes leading to judicial decisions. Nevertheless, general reference to the term "harm" in State practice is significant. This trend may be explained by difficulties in, first, determining a fixed content for harm which would be relevant to all circumstances and, secondly, agreeing on a clear and fixed threshold separating tolerable harm from harm that may be tolerated only with the prior consent of the injured party. Pinpointing such a threshold is extremely difficult and appears to be a function of policy decision for particular activities, etc. Consequently, the threshold which separates tolerable injury from that which may be tolerated only with prior consent seems to be fairly flexible. Precedent demonstrates that there are certain criteria, more or less common to various forms of State practice, which could assist in fixing the threshold between the tolerable injury and that which requires consent. First, the harm must be *substantial*. Although the term "substantial" itself is ambiguous, it suggests a dividing line which may be determined by examining local or regional expectations.

<sup>117</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 6, p. 260.

<sup>118</sup> *Ibid.*, p. 261.

<sup>119</sup> *Ibid.*, p. 266.

<sup>120</sup> I.C.J. Reports 1969, p. 79.

<sup>121</sup> I.C.J. Reports 1973, *Nuclear Tests (Australia v. France)*, Interim measures, Order of 22 June 1973, p. 103, para. 22.

<sup>122</sup> I.C.J. Pleadings, *Nuclear tests*, vol. 1, pp. 8-14.



Secondly, the harm must affect human beings, that is, there must be direct personal injury, economic loss, damage to property, etc., or entail indirect material and property losses, such as injury to the economic resources of the State through substantial injury to its natural resources (fisheries, coastal waters, drinking or irrigation water, etc.). Thirdly, the injury *may be to legally protected interests. Occasionally injury may be to interests not necessarily having explicit legal protection.*

## 2. COMPETENCE TO DECIDE WHAT CONSTITUTES HARM

168. Although, in treaties, the States parties have agreed on the definition of harm, it would not be entirely correct to assume that competence to decide what constitutes harm for the purposes of consultation and negotiation lies with the States parties to a dispute. It seems that primary competence to decide what constitutes harm and to demand negotiation lies with the injured or potentially injured State. Competence to decide whether a particular activity requires the *consent* of the injured State, however, appears to be a competence shared between the acting and the injured State, or devolved on a third party, such as a group of designated consultants, joint commissions, or even an arbitral tribunal.

169. Competence to decide what constitutes harm includes the initial decision on the definition, extent and measure of harm, or the application of those decisions to a particular factual situation. In most treaties such competence appears to be both prescriptive and applicative.

### (a) *Multilateral agreements*

170. Some multilateral agreements have already defined harm and sometimes enumerated harmful activities. Decisions regarding these matters, therefore, have already been taken by the parties to the agreements. Occasionally, some multilateral agreements, in addition to defining harm and harmful activities, have provided for review or final decision regarding the permissibility of an activity to be taken by the appropriate authorities. In some agreements there is explicit or implicit language as to who decides what constitutes harm. Under the 1974 Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden, for example, each contracting State appoints an organism, known as the "supervisory authority", to decide whether a particular activity which is to take place is environmentally harmful. Once such a decision is made, the supervisory authority can institute proceedings in the courts or with the administrative authority for a decision on the permissibility of the activity. If the court or the administrative authority finds the activity environmentally harmful, the supervisory authority must inform the supervisory authority of the other State of its opinion. The relevant articles of the Convention read:

#### *Article 4*

Each State shall appoint a special authority (supervisory authority) to be entrusted with the task of safeguarding general environmental interests in so far as regards nuisances arising out of environmentally harmful activities in another Contracting State.

For the purpose of safeguarding such interests, the supervisory authority shall have the right to institute proceedings before or be heard by the competent court or administrative authority of another Contracting State regarding the permissibility of the environmentally harmful activities if an authority or other representative of general environmental interests in that State can institute proceedings or be heard in matters of this kind, as well as the right to appeal against the decision of the court or the administrative authority in accordance with the procedures and rules of appeal applicable to such cases in the State concerned.

#### *Article 5*

If the court or the administrative authority examining the permissibility of environmentally harmful activities (examining authority) finds that the activities entail or may entail nuisance of significance in another Contracting State, the examining authority shall, if proclamation or publication is required in cases of that nature, send as soon as possible a copy of the documents of the case to the supervisory authority of the other State, and afford it the opportunity of giving its opinion. Notification of the date and place of a meeting or inspection shall, where appropriate, be given well in advance to the supervisory authority which, moreover, shall be kept informed of any developments that may be of interest to it.

With regard to article 5, the Protocol to the Convention provides:

Article 5 shall be regarded as applying also to applications for permits where such applications are referred to certain authorities and organizations for their opinion but not in conjunction with proclamation or publication procedures.

171. Articles 6 and 7 of the Convention further provide:

#### *Article 6*

Upon the request of the supervisory authority, the examining authority shall, in so far as compatible with the procedural rules of the State in which the activities are being carried out, require the applicant for a permit to carry out environmentally harmful activities to submit such additional particulars, drawings and technical specifications as the examining authority deems necessary for evaluating the effects in the other State.

#### *Article 7*

The supervisory authority, if it finds it necessary on account of public or private interests, shall publish communications from the examining authority in the local newspaper or in some other suitable manner. The supervisory authority shall also institute such investigations of the effects in its own State as it deems necessary.

Article 11 also provides:

#### *Article 11*

Where the permissibility of environmentally harmful activities which entail or may entail considerable nuisance in another Contracting State is being examined by the Government or by the appropriate Minister or Ministry of the State in which the activities are being carried out, consultations shall take place between the States concerned if the Government of the former State so requests.

Accordingly, the States concerned may resolve differences among themselves concerning the permissibility of environmentally harmful activities which entail or may entail *considerable nuisance* in other contracting States.

172. An opinion by a commission on the effects of an activity may also be requested. In this connection, article 12 provides:

#### *Article 12*

In cases such as those referred to in article 11, the Government of each State concerned may demand that an opinion be given by a commission which, unless otherwise agreed, shall consist of a chairman from another Contracting State to be appointed jointly by the Parties and three members from each of the States concerned. Where such a

commission has been appointed, the case cannot be decided upon until the commission has given its opinion.

Each State shall remunerate the members it has appointed. Fees or other remuneration of the chairman as well as any other costs incidental to the activities of the commission which are not manifestly the responsibility of one or the other State shall be equally shared by the States concerned.

Where a commission has been appointed, the case according to article 12, cannot be decided upon until the commission has given its opinion.

173. The 1950 Protocol between Belgium, France and Luxembourg for the Establishment of a Tripartite Standing Committee on Polluted Waters provides for a joint technical sub-committee with the following terms of reference:

(a) to define the pollution factors (industrial or communal origin, degree of intensity, etc.), collect any appropriate technical opinions, assess each State's share of responsibility for the pollution;

174. Article 9 of the 1974 Convention for the Prevention of Marine Pollution from Land-based Sources provides that decisions shall be made by a joint commission. Under this article, agreement must be reached among the States concerned in regard to certain polluting substances that are likely to prejudice the interests of other parties to the Convention. The Commission referred to in article 15 of the Convention may also make recommendations for the appropriate resolution of the problem, at the request of any contracting party. The final decision appears to be made by the parties involved (see paras. 2, 3 and 4 of art. 9, cited in para. 121 above).

175. In some conventions, the decision as to what constitutes harm may be made either by the acting State or by the injured State. However, such unilateral decision may subsequently be subject to review. For example, the 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties appears to leave the decision as to what constitutes "major harmful consequences" to the *coastal State* (art. I, para. 1). Such decision by the coastal State may eventually be subject to review, should a dispute arise between that State and the flag State. Under article VIII of the Convention, any dispute between the parties, if not settled by negotiation, must be settled by conciliation or arbitration. The party (the coastal State) which took the measures may not refuse a request for conciliation or arbitration:

#### Article VIII

1. Any controversy between the Parties as to whether measures taken under article I were in contravention of the provisions of the present Convention, to whether compensation is obliged to be paid under article VI, and to the amount of such compensation shall, if settlement by negotiation between the Parties involved or between the Party which took the measures and the physical or corporate claimants has not been possible, and if the Parties do not otherwise agree, be submitted upon request of any of the Parties concerned to conciliation or, if conciliation does not succeed, to arbitration, as set out in the annex to the present Convention.

2. The Party which took the measures shall not be entitled to refuse a request for conciliation or arbitration under provisions of the preceding paragraph solely on the grounds that any remedies under municipal law in its own courts have not been exhausted.

#### (b) *Bilateral agreements*

176. In some bilateral agreements, it is for the contracting States to decide what constitutes harm for purposes

of prior negotiation and consultation. The 1931 Convention between Romania and Yugoslavia<sup>123</sup> provides that, if either party intends to take certain measures on the frontier watercourse in its territory which might injuriously affect any interests in the territory of the other State, it must obtain the agreement of that State. Article 19 of chapter III of the Convention provides:

#### Article 19

If either State desires to carry out on a watercourse within its territory new works which might injuriously affect any interests in the territory of the other State, such works may be carried out only by agreement between the two States.

The Convention does not define the interests "injuriously" affected; hence it cannot be assumed that the parties had agreed on the definition of injury. In bilateral agreements concerning all activities with extraterritorial environmental effect, such as the 1983 Agreement between the United States of America and Mexico,<sup>124</sup> there seems to be no indication as to who has the competence to decide what constitutes harm. Since the parties have agreed to co-ordinate their co-operation in activities affecting the environment of border areas, it may be assumed that, in the *same* spirit of co-operation, decisions as to what constitutes harm will be the result of agreement between the parties. This assumption, however, is not supported by specific provisions of the Agreement.

177. Article 28 of the 1960 Treaty between Belgium and the Netherlands<sup>125</sup> provides that it is for the competent *authorities of the two Governments* to determine the permissible concentration of chemical substances in the waters of the canal in the vicinity of the Belgian-Netherlands frontier:

#### Article 28

Pursuant to the provisions of paragraph (1) (d), of annex III to this Treaty, the Belgian and Netherlands Ministers aforesaid shall determine the permissible concentration of chemical substances. The Ministers may by agreement modify the standards of quality set forth in the said annex.

178. Similarly, article 4 of chapter I of the 1964 Agreement between Finland and the Soviet Union<sup>126</sup> provides that the two parties should, to the extent required, *jointly* decide upon the standard of quality of water in each frontier watercourse. The article reads in part:

#### Article 4

... The Contracting Parties shall, to the extent required, jointly decide upon the standards of quality to be set for the water in each frontier watercourse or part thereof and shall, in accordance with the procedure laid down in chapter II, co-operate in keeping the quality of the water in frontier watercourses under observation and in taking measures to increase the self-cleansing capacity of the said watercourses.

179. Article 3 of the 1958 Treaty between Czechoslovakia and Poland<sup>127</sup> provides that the two

<sup>123</sup> See footnote 60 above.

<sup>124</sup> See footnote 16 above.

<sup>125</sup> Treaty of 20 June 1960 between Belgium and the Netherlands concerning the improvement of the Terneuzen and Ghent Canal, and the settlement of various related matters.

<sup>126</sup> Agreement of 24 April 1964 between Finland and the USSR concerning frontier watercourses.

<sup>127</sup> See footnote 86 above.

parties shall *jointly agree* on the amount of water to be taken from frontier waters for domestic, industrial and other uses (see para. 141 above).

180. Under some bilateral agreements, a joint commission determines what constitutes tolerable or intolerable harm. Article 2, paragraph 2, of the 1955 Agreement between Yugoslavia and Romania,<sup>128</sup> for example, provides that the erection of any new installations and the execution of any new works in the territory of either contracting party which may change the existing régime of the waters, interfere with their free discharge, change their quality or cause flooding on water control systems, shall be referred to the *Mixed Commission* for examination (see para. 142 above).

181. The 1929 Convention between Norway and Sweden<sup>129</sup> establishes a more elaborate system for examining the question of harm. Under article 16, *each contracting party* may ask the other for the information needed to determine what effects a particular measure, envisaged by the acting State, may have on the other State (see para. 77 above). As specified in article 17, each State may require that the question be examined by a *commission* consisting of two, four or six members, half of whom to be nominated by each State:

#### EXAMINATION OF QUESTIONS BY A COMMISSION<sup>130</sup>

##### Article 17

Each State may require that, in order to examine the question, a Commission should be appointed consisting of two, four or six members, half of whom shall be nominated by each State.

Under article 18, the Commission may also ask for expert assistance. The Commission is also empowered to examine applications by non-governmental entities. Parties, including individuals, whose rights are affected by an undertaking must have the opportunity to defend their interests before the Commission:

##### Article 18

1. The Commission shall examine the questions which concern both countries and may for that purpose call in expert assistance. It shall establish its own rules of procedure.

2. Parties whose rights are affected by the undertaking shall receive at reasonable notice an opportunity of defending their interests before the Commission.

3. Each State shall fix and pay the remuneration of the members of the commission which it has appointed. The other costs of the Commission shall be paid by the applicant, but shall be advanced by the State which has called for the appointment of the Commission. The applicant may be required to pay an appropriate sum on account or to give security for such costs.

Under article 19, the Commission must give its opinion as to whether the measure should be carried out and on how the work is to be executed with minimum damage and inconvenience, as well as on how to prevent or minimize the damage to or detrimental effect upon public interests. It must also decide on the security that must be given for fulfilling the stipulated conditions governing the work and for any other obligations which may result therefrom:

##### Article 19

1. The Commission shall give its opinion as to whether the undertaking should be carried out, and in that case shall decide in so far as circumstances require:

(a) How the work is to be executed so that the object may be attained without excessive cost and with the minimum damage and inconvenience, and also what measures may be considered necessary to prevent or decrease the damage to or detrimental effect upon public interests;

(b) What rules should be laid down regarding the conservancy and outflow of the water;

(c) The amount of the charges to be paid and the funds to be deposited in accordance with the provisions of article 8;

(d) Whether the arrangements provided for in article 10 regarding participation in the work should be approved;

(e) What security is to be given for fulfilling the stipulated conditions governing the work and for any other obligations which may result therefrom;

(f) Within what period the work is to be begun and completed;

(g) For what period the authorization is to be valid;

(h) Any other questions concerning the two countries in connection with the work.

2. When the Commission's inquiry has been concluded, its opinion shall be communicated to both States. Each State may ask the Commission for further information, which shall also be communicated to both States.

182. Article 20 of this Convention also provides that the competent authority to decide whether the consent of the other State is required for an undertaking, and the conditions under which such consent may be given, shall be the King. If such consent is required and if it has been made subject to special conditions, the competent authority to decide whether the measures are permissible is also the King of the country where the work is to be carried out:

#### COMPETENT AUTHORITY TO GIVE DECISIONS

##### Article 20

The question whether the consent of the other State is required for an undertaking and if so whether such consent should be given and on what conditions, shall be decided by the King. If such consent is required and if it has been subjected to special conditions, the question whether the undertaking is permissible and on what conditions shall also be decided by the King in the country in which the work is to be carried out.

Under article 21, the authorization for an undertaking is not valid in the other country (the potentially injured State) unless the applicant has obtained a certificate from that country:

#### CONTENTS OF THE AUTHORIZATION

##### Article 21

1. Authorization for an undertaking shall be granted by the competent authority in the country in which it is to be carried out. The authorization shall contain not only the conditions stipulated by that State but also any conditions which may have been submitted for the other State's approval in accordance with article 13. *The authorization shall further stipulate that it is not valid in the other country unless the applicant has obtained the certificate mentioned in article 22 from the competent authority of that country.\**

2. When the final decision has been reached by the State in which the undertaking is to be carried out, a copy thereof shall be transmitted to the other State at the same time as the decision is sent to the applicant.

Article 22 provides that, when authorization for an activity has been granted by the acting State, the applicant must *within 180 days* obtain from the other State (the potentially injured State) a certificate that authorization has been granted in the manner provided in the agree-

<sup>128</sup> See footnote 89 above.

<sup>129</sup> See footnote 36 above.

<sup>130</sup> Articles 18 and 19 below come under the same heading.

ment, otherwise the undertaking may not be carried out without new authorization:

#### LEGAL EFFECT OF THE AUTHORIZATION IN THE OTHER COUNTRY

##### Article 22

1. When authorization for an undertaking has been granted and has acquired legal effect, the applicant must within 180 days obtain from the competent authority in the other country a certificate that authorization has been granted in the manner provided for in this Convention. If the certificate is not applied for within the above-mentioned period, the undertaking may not be carried out without fresh authorization.

2. If a waterfall, immovable property or transport or floating interest on account of which authorization for an undertaking has been granted belongs to the other country, the certificate may not be issued unless a decision has been taken regarding the regulations to be established under article 3, paragraph 2.

3. When such a certificate has been issued, any inhabitant of the country shall be obliged, always subject to compliance with the laws of the country and provided he receives compensation therefor, to give up the such immovable property as may be required and to submit to any servitude upon it and tolerate any damage or nuisance caused by the undertaking.

183. The Frontier Water Commission established by the 1922 Treaty between Germany and Denmark<sup>131</sup> is competent to decide on authorizations for certain activities on the joint waters between Germany and Denmark. Article 30 of the Treaty reads:

##### Article 30. Procedure to be followed in making applications

The necessary drawings and explanations shall be attached to all applications for the erection of new works or the alteration of existing works in accordance with article 29. Applications shall be laid before the head district official or head county official concerned whose duty it is to submit them to the Frontier Water Commission, subject, if necessary, to the provision of suitable security for the costs.

If the Frontier Water Commission is definitely of opinion that a proposal should not be adopted, it may at once reject such proposal by means of a decision in which the reasons for the rejection are given.

In other cases, the proposed use of the watercourse shall be brought to the notice of the public in the manner which is customary in the locality in all Communes or manorial districts (Gutsbezirke), the land of which might be affected by the operation of the works in the event of their being authorized.

Further, the attention of all persons who will clearly suffer damage from the authorization of the works shall be drawn to the public notification by means of registered letters.

184. For the disposal of radioactive materials within the potentially injured State from an operation carried out in that territory by the acting State, the prior permission of the potentially injured State is required. The 1964 Agreement between the United States of America and Italy regarding the use of Italian ports by the United States nuclear ship *Savannah*<sup>132</sup> requires the prior approval of the Italian authorities for the disposal of radioactive materials from the ship in Italian territory. The relevant provisions of article V of the Agreement read:

##### Article V

...

(b) Disposal of radioactive liquid or solid substances within Italian territorial waters and ports shall take place from the ship only with the specific prior approval of competent Italian authorities.

(c) Release of any radioactive gaseous substances from the ship while within Italian territorial waters and ports shall be at or below permissible levels as specified by competent Italian authorities. Disposal or release of any radioactive gaseous substances within

Italian territorial waters and ports which exceed such permissible levels shall be subject to prior approval of competent Italian authorities.

Article 20 of the 1963 Operational Agreement between the Netherlands and the United States of America<sup>133</sup> on the same subject contains a similar provision:

#### RADIOACTIVE WASTE

##### Article 20

The Government of the United States shall ensure that gaseous, liquid or solid radioactive waste shall remain on board the Ship in accordance with the *Operating Manual* while the Ship is in Netherlands waters or in the port area of Rotterdam unless the express prior approval of the authorities assigned therefor by the Netherlands Government has been obtained for the disposal of said waste.

#### (c) Judicial decisions and State practice other than agreements

185. Judicial decisions and official correspondence recognize that States may unilaterally determine or assess the harm likely to result from activities undertaken by them or within their territories when information about the activity is uniquely within their own knowledge. For example, in the *Corfu Channel* case, the obligation imposed on Albania to notify shipping authorities about the existence of minefields in its territorial waters (an international strait) may be interpreted as implicitly recognizing Albania's initial duty to decide unilaterally what constitutes harm requiring notification. In its judgment of 9 April 1949, the International Court of Justice noted that Albania had exclusive control of the area.<sup>134</sup> Of course, here competence to define injury for purposes of notification should be distinguished from competence to apply that definition to a particular factual situation. It appears that the Court considered Albania as having competence to recognize that the laying of mines in waters under its jurisdiction was bound to cause material injuries to the British ships passing through and that Albania should have taken action, such as informing the British of the existence of the mines. It follows from the judgment that even competence to apply a particular definition of injury to a particular situation is not discretionary. On the contrary, it is obligatory and, in the absence of a proper performance of this competence, the State is liable for the injuries it may have caused.

186. Likewise, the United States Supreme Court, in the *United States v. Arjona* case (1887),<sup>135</sup> stated that, with respect to counterfeiting, it was the duty of the State in whose territory an injurious activity was taking place to decide what constituted harm and to take appropriate steps to prevent injury. Here also competence to decide implies a duty to apply measures to assess injury to a particular activity:

The law of nations requires every national government to use "due diligence" to prevent a wrong being done within its own dominion to another nation with which it is at peace, or to the people thereof; and because of this the obligation of one nation to punish those who within its own jurisdiction counterfeited the money of another nation has long been recognized.<sup>136</sup>

<sup>133</sup> See footnote 22 above.

<sup>134</sup> *I.C.J. Reports* 1949, p. 8.

<sup>135</sup> *United States Reports*, vol. 120, p. 479.

<sup>136</sup> *Ibid.*, p. 484.

<sup>131</sup> See footnote 59 above.

<sup>132</sup> See footnote 20 above.

187. The Supreme Court further stated that the United States had the *power* and that it was its *duty* to prevent and punish the counterfeiting, within its jurisdiction, of the money of another nation:

... it was incumbent on the United States as a nation to use *due diligence to prevent*\* any *injury*\* to another *nation or its people*\* by counterfeiting its money, or its public or *quasi* public securities.<sup>137</sup>

188. The decisions requiring States *to assess harm unilaterally* and to take *preventive measures* are founded on the notions of the *necessity* of inter-State relations, of *comity* and of *reciprocity*. The Supreme Court gave concrete expression to those notions in the *Arjona* case, concerning the power and the duty of the United States Government to prevent and punish the counterfeiting within its jurisdiction of the notes, bonds and other securities issued by foreign Governments or under their authority. The Court stated:

... Any uncertainty about the genuineness of the security necessarily depreciates its value as a merchantable commodity, and against this international comity requires that national protection shall, as far as possible, be afforded. *If there is neglect*\* in that, the United States may, with propriety, call on the proper Government to provide for the punishment of such an offence, and thus secure the restraining influences of a fear of the consequences of wrong doing. A refusal may not, perhaps, furnish sufficient cause for war, but would certainly give just ground of complaint, and thus disturb that harmony between the Governments which each is bound to cultivate and promote.

But if the United States can require this of another, that other may require it of them, because international obligations are of necessity reciprocal in their nature. The right, if it exists at all, is given by the law of nations, and what is law for one is, under the same circumstances, law for the other. . . .<sup>138</sup>

Within this context the Supreme Court also recognized the competence of the injured State to inform the acting State that a particular activity taking place within its jurisdiction and under its control had caused or might cause injury to it. After elaborating on the importance of the genuineness of United States Security Notes to the country's economy, the Court stated that, when there was a counterfeiting of United States Security Notes abroad, the United States Government had the *right* to call on the proper Government for protection.

189. It also happens that the acting State unilaterally determines what are tolerable or intolerable injuries where the activity or its serious and harmful consequences occur in the shared domain. The United States of America and the United Kingdom, at the time of the *Eniwetok Atoll* and *Christmas Island* nuclear tests respectively, unilaterally assessed the possible injuries that the tests might cause to other States and their nationals. Before undertaking nuclear testing in the Pacific Ocean in 1958, the United States Government studied the area which could be affected by nuclear tests, established a "danger area", and then informed the Japanese Government as well as other States and vessels that were planning to pass through that area. Similarly, the British Government, after examining the extent of the area which could be affected by nuclear tests, established a "danger area" on the high seas around Christmas Island for its first hydrogen bomb tests, on 7 January 1957. It may be assumed that the United States and British Governments had made a

unilateral decision regarding the intolerable injuries which might be caused by their activities within the "danger area". Despite claims by the Government of Japan that the tests would also have a devastating impact on Japanese interests outside the "danger area", the acting States assessed the impact on Japanese interests as inferior to the interest of the "free world" in security from nuclear war.<sup>139</sup>

190. In at least one incident, the acting State assured the injured State that it would comply with the domestic laws of the latter as to standards of tolerable injury. When there was a *serious* possibility of grave pollution originating from a plant to be built in Lorraine, in France, near the border of the Federal Republic of Germany, the local authorities of Lorraine gave assurances to their German counterparts that the plant would comply with German emission standards, and ordered the plant to do so.<sup>140</sup> In this case, competence to define harm appears to have lain with the injured State, while the acting State had the responsibility of applying the prescribed standards.

191. The question of observance by the acting State of the standards of the injured State in regard to pollution was touched upon by the United States Supreme Court in an interstate water pollution case. In the *Illinois v. Milwaukee* case (1972),<sup>141</sup> the Supreme Court, stressing the importance of reaching an equitable solution, stated that the high standards of prevention of pollution of the neighbouring State should be taken into account, in addition to the requirements of the federal law:

... While federal law governs, consideration of State standards may be relevant. . . . Thus, a State with high water-quality standards may well ask that its strict standards be honoured and that it not be compelled to lower itself to the more degrading standards of a neighbour. . . .<sup>142</sup>

192. In the *Lake Lanoux* case, the tribunal held that States were required to enter into negotiations with the other States concerned before undertaking the industrial utilization of international rivers. Both States had interests that must be taken into consideration:

France is entitled to exercise her rights; she cannot ignore Spanish interests.

Spain is entitled to demand that her rights be respected and that her interests be taken into consideration.<sup>143</sup>

In addition, the tribunal stated that, while the upstream State had the *right* to give preference to its own scheme, it had the *duty* also to examine schemes proposed by the downstream State:

As a matter of form, the upstream State has, procedurally, a right of initiative; it is not obliged to associate the downstream State in the elaboration of its schemes. If, in the course of discussions, the downstream State submits schemes to it, the upstream State must ex-

<sup>139</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 4, pp. 586, 599 and 600.

<sup>140</sup> *International Environment Reporter*, Washington, D.C., vol. 3, No. 9, 10 September 1980, cited by M. Bothe, "International legal problems of industrial siting in border areas and national environment policies", OECD, *Transfrontier Pollution and the Role of States*, 1981, p. 88, footnote 42.

<sup>141</sup> *United States Reports*, vol. 406, p. 91.

<sup>142</sup> *Ibid.*, p. 107.

<sup>143</sup> *International Law Reports 1957* (see footnote 67 above), p. 140, para. 23 of the award.

<sup>137</sup> *Ibid.*, p. 488.

<sup>138</sup> *Ibid.*, pp. 486-487.

amine them, but it has the right to give preference to the solution contained in its own scheme provided that it takes into consideration in a reasonable manner the interests of the downstream State.

24. In the case of *Lake Lanoux*, France has maintained to the end the solution which consists in diverting the waters of the Carol to the Ariège with full restitution. By making this choice France is only making use of a right; the development works of Lake Lanoux are on French territory, the financing of and responsibility for the enterprise fall upon France, and France alone is the judge of works of public utility which are to be executed on her own territory, save for the provisions of articles 9 and 10 of the Additional Act, which, however, the French scheme does not infringe.

On her side, Spain cannot invoke a right to insist on a development of Lake Lanoux based on the needs of Spanish agriculture. In effect, if France were to renounce all of the works envisaged on her territory, Spain could not demand that other works in conformity with her wishes should be carried out. Therefore, she can only urge her interests in order to obtain, within the framework of the scheme decided upon by France, terms which reasonably safeguard them.<sup>144</sup>

However, should no agreement occur, the States had the option of seeking the decision of a third party:

... It is for each State to evaluate in a reasonable manner and in good faith the situations and the rules which will involve it in controversies; its evaluation may be in contradiction with that of another State; in that case, should a dispute arise the Parties normally seek to resolve it by negotiation or, alternatively, by submitting to the authority of a third party; but one of them is never obliged to suspend the exercise of its jurisdiction because of the dispute except when it assumes an obligation to do so; by exercising its jurisdiction it takes the risk of seeing its international responsibility called into question, if it is established that it did not act within the limits of its rights. The commencement of arbitral proceedings in the present case illustrates perfectly these rules in the functioning of the obligations subscribed to by Spain and France in the Arbitration Treaty of July 10, 1929.<sup>145</sup>

193. In cases of distribution of shared resources or delimitation of territorial control over what has been traditionally regarded as the shared domain, judicial decisions recognize *negotiation* rather than *unilateral determination* as the most appropriate method. The International Court of Justice required the opening of negotiations in the matter of the distribution of fish resources in the *Fisheries Jurisdiction* case, in the delimitation of the continental shelf in the *North Sea Continental Shelf* cases, and in the delimitation of sea areas in the *Anglo-Norwegian Fisheries* case.

194. Recourse to the decision of a third party has also been recognized as appropriate in determining harm in extraterritorial injuries. In the *Trail Smelter* case, the tribunal appointed a panel of technical consultants to assess the injurious impact of smelting activities in British Columbia to the State of Washington. The consultants were only one aspect of a complex temporary régime established to conduct experiments and collect data:

To enable it to establish a permanent régime based on the more adequate and intensive study and knowledge above referred to, the Tribunal establishes the following temporary régime:<sup>146</sup>

(1) For the purpose of administering an experimental period, to continue to a date not later than October 1, 1940, the Tribunal will appoint two Technical Consultants, and in case of vacancy will appoint the successor. Such Technical Consultants to be appointed in the first place shall be Reginald S. Dean and Robert E. Swain, and they shall cease to act as Advisers to the Tribunal under the Convention during such trial period.

(2) The Tribunal directs that, before May 1, 1938, a consulting meteorologist, adequately trained in the installation and operation of the necessary type of equipment, be employed by the Trail Smelter, the appointment to be subject to the approval of the Technical Consultants. The Tribunal directs that, beginning May 1, 1938, such meteorological observations as may be deemed necessary by the Technical Consultants shall be made, under their direction, by the meteorologist, the scientific staff of the Trail Smelter, or otherwise. The purpose of such observations shall be to determine, by means of captive balloons and otherwise, the weather conditions and the height, velocity, temperature, and other characteristics of the gas-carrying and other air currents and of the gas emissions from the stacks.

195. The *tribunal determined what types of experiments were to be conducted, how and when:*

(3) The Tribunal further directs that beginning May 1, 1938, there shall be installed and put in operation and maintained by the Trail Smelter, for the purpose of providing information which can be used in determining present and prospective wind and other atmospheric conditions, and in making a prompt application of those observations to the control of the Trail Smelter plant operation:

(a) Such observation stations as the Technical Consultants deem necessary.

(b) Such equipment at the stacks as the Technical Consultants may find necessary to give adequate information of gas conditions and in connection with the stacks and stack effluents.

(c) Sulphur dioxide recorders, stationary and portable (the stationary recorders not to exceed three in number).

Within this régime, the consultants were given discretion to modify their *instructions*:

(d) The Technical Consultants shall have the direction of and authority over the location in both the United States and the Dominion of Canada, and over the installation, maintenance and operation of all apparatus provided for in paragraph 2 and paragraph 3. They may require from the meteorologist and from the Trail Smelter regular reports as to the operation of all such apparatus.

(e) The Technical Consultants may require regular reports from the Trail Smelter as to the methods of operation of its plant in such form and at such times as they shall direct; and the Trail Smelter shall conduct its smelting operations in conformity with the directions of the Technical Consultants and of the Tribunal, based on the result of the data obtained during the period hereinafter named; and the Technical Consultants and the Tribunal may change or modify at any time its or their instructions as to such operations.

(f) It is the intent and purpose of the Tribunal that the administration of the observations, experiments, and operations above provided for shall be as flexible as possible, and subject to change or modification by the Technical Consultants and by the Tribunal, to the end that conditions as they at any time may exist, may be changed as circumstances require.

(4) The Technical Consultants shall make report to the Tribunal at such dates and in such manner as it shall prescribe as to the results obtained and conclusions formed from the observations, experiments, and operations above provided for.

(5) The observations, experiments, and operations above provided for shall continue on a trial basis through the remainder of the crop-growing season of 1938, the crop-growing seasons of 1939 and 1940, and the winter seasons of 1938-1939 and 1939-1940 and until October 1, 1940, unless the Tribunal shall find it practicable or necessary to terminate such trial period at an earlier date.

(6) At the end of the trial period above provided for, or at the end of such shorter trial period as the Tribunal may find to be practicable or necessary, the Tribunal in a final decision will determine upon a permanent régime and upon the indemnity and compensation, if any, to be paid under the Convention. Such final decision, under the agreements for extension, heretofore entered into by the two Governments under article XI of the Convention, shall be reported to the Governments within three months after the date of the end of the trial period.

(7) The Tribunal shall meet at least once in the year 1939, to consider reports and to take such action as it may deem necessary.

(8) In case of disagreement between the Technical Consultants, they shall refer the matter to the Tribunal for its decision, and all per-

<sup>144</sup> *Ibid.*

<sup>145</sup> *Ibid.*, p. 132, para. 16 of the award.

<sup>146</sup> United Nations, *Reports of International Arbitral Awards*, vol. III, pp. 1934-1936.

sons and the Trail Smelter affected hereunder shall act in conformity with such decision.

The régime was to be financed by the acting State:

(10) For the carrying out of the temporary régime herein prescribed by the Tribunal, the Dominion of Canada shall undertake to provide for the payment of the following expenses thereof: (a) the Tribunal will fix the compensation of the Technical Consultants and of such clerical or other assistants as it may find necessary to employ; (b) statements of account shall be rendered by the Technical Consultants to the Tribunal and approved by the Chairman in writing; (c) the Dominion of Canada shall deposit to the credit of the Tribunal from time to time in a financial institution to be designated by the Chairman of the Tribunal, such sums as the Tribunal may find to be necessary for the payment of the compensation, travel, and other expenses of the Technical Consultants and of the clerical or other assistants; (d) written report will be made by the Tribunal to the Dominion of Canada of all the sums received and expended by it, and any sum not expended shall be refunded by the Tribunal to the Dominion of Canada at the conclusion of the trial period.

### C. Balancing of interests

196. An important element in the process of impact assessment is reconciling the interests of the parties concerned with the common interest of the larger community. The balancing of interests appears to be an integral part of treaties and is referred to in judicial decisions and official correspondence concerning activities with potentially harmful impact. The concept of balance of interests in terms of "cost-benefit analysis" in torts law relates to the balancing of economic and financial interests and factors involved in a tortious act. In international relations, treaties and judicial decisions, the concept of balance of interests appears to have a broader meaning; it includes other values, in addition to economic factors, such as the well-being and health of populations, respect for the territorial sovereignty and integrity of other States, the safety and security of neighbouring States, etc.

197. Before reviewing treaties and other forms of State practice dealing with the concept of balance of interests, two points should be made. First, the initial step in balancing interests is to determine what interests each State or the larger community has that should be balanced; secondly, what is the value to be attached to each interest and how they are to be compared with one another. These difficulties arise to some extent in treaties, but they arise more sharply in judicial decisions.

#### (a) Multilateral agreements

198. The concept of balance of interests is to some extent developed in the 1974 Convention on the Protection of the Marine Environment of the Baltic Sea Area and in the 1976 Convention for the Protection of Mediterranean Sea against Pollution. The regulations enumerated in annex V of the former Convention are a clear attempt to balance the interests involved and analyse costs and benefits to different parties under various alternatives. These regulations evaluate the substances that may be dumped at sea, the location of dumping, the conditions of dumping, the possible effects of such substances on, for example, marine life, fish stocks and other uses of the sea, etc. The latter Convention makes a similar attempt at balancing interests in annex III of its Protocol,

which enumerates the factors to be considered in establishing criteria governing the issue of permits for the dumping of substances at sea. These two Conventions are primarily concerned with shared domains; consequently the common interests of the larger community of coastal States are predominant. The Conventions attempt to accommodate such common interests with the interests of individual States. The 1963 Vienna Convention on Civil Liability for Nuclear Damage introduces in this respect a concept that may be called risk exclusion. Accordingly, when the risks involved in certain activities are minimal, they are exempt from certain rules, without of course affecting the question of liability in case of injury. Article I, paragraph 2, of the Convention reads:

#### Article I

...

2. An Installation State may, if the small extent of the risks involved so warrants, exclude any small quantities of nuclear material from the application of this Convention, provided that:

(a) maximum limits for the exclusion of such quantities have been established by the Board of Governors of the International Atomic Energy Agency; and

(b) any exclusion by an Installation State is within such established limits.

The maximum limits shall be reviewed periodically by the Board of Governors.

199. In other conventions dealing with the interests of two or more States affected by certain activities, the balancing of interests focuses primarily on the interests of the States directly involved. Article 2 of the 1974 Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden clearly illustrates this focus:

#### Article 2

In considering the permissibility of environmentally harmful activities, the nuisance which such activities entail or may entail in another Contracting State shall be equated with a nuisance in the State where the activities are carried out.

Articles 6, 7 and 12 of the Convention further provide for methods to be used in order to balance the interests of the parties more effectively. Under article 6, the supervisory authority may request the examining authority to require, in so far as is compatible with the procedural rules of the State where the activities are being carried out, that the acting entity submit such additional information as the examining authority deems necessary for evaluating the effects in the other State. Article 7 empowers the supervisory authority, if it finds it necessary on account of public or *private interests*, to publish communications from the examining authority in the local newspaper or to publicize them in some other suitable manner. The supervisory authority is also required to institute investigations of the effects in its own State as it deems necessary. The purpose, of course, is to protect the public or private interests within the State in whose territory the activities are taking place. Nevertheless, under article 12, the Government of each State concerned may demand that an opinion be given by a *commission* concerning the permissibility of environmentally harmful activities which entail or may entail considerable nuisance in another State. The commission, unless otherwise agreed, shall consist of a



chairman from a third contracting State to be appointed jointly by the parties and three members from each of the States concerned. The case cannot be decided upon until the commission has given its opinion (see paras. 172-173 above).

200. The concept of the balancing of interests is also incorporated in the 1950 Protocol between Belgium, France and Luxembourg to Establish a Tripartite Standing Committee on Polluted Waters. The Protocol provides for the establishment of a joint technical subcommittee with the function of defining the polluting factors, collecting any appropriate technical opinions and assessing each State's share of responsibility for the pollution.

201. The *physical and technical capacity of States to prevent harm* caused by their activities is also regarded as an element affecting the balancing of interests. This does not necessarily mean that these States are authorized to carry out harmful activities, but rather that technical assistance should be accorded to countries that do not have this capacity to enable them to prevent or minimize harm. Article 202 of the 1982 United Nations Convention on the Law of the Sea provides for such technical assistance:

*Article 202. Scientific and technical assistance to developing States*

States shall, directly or through competent international organizations:

(a) promote programmes of scientific, educational, technical and other assistance to developing States for the protection and preservation of the marine environment and the prevention, reduction and control of marine pollution. Such assistance shall include, *inter alia*:

- (i) training of their scientific and technical personnel;
- (ii) facilitating their participation in relevant international programmes;
- (iii) supplying them with necessary equipment and facilities;
- (iv) enhancing their capacity to manufacture such equipment;
- (v) advice on and developing facilities for research, monitoring, educational and other programmes;

(b) provide appropriate assistance, especially to developing States, for the minimization of the effects of major incidents which may cause serious pollution of the marine environment;

(c) provide appropriate assistance, especially to developing States, concerning the preparation of environmental assessments.

The same Convention, with a view to the balancing of interests, accords preferential treatment to developing countries. That treatment is expressly defined in article 203:

*Article 203. Preferential treatment for developing States*

Developing States shall, for the purposes of prevention, reduction and control of pollution of the marine environment or minimization of its effects, be granted preference by international organizations in:

- (a) the allocation of appropriate funds and technical assistance; and
- (b) the utilization of their specialized services.

Such preferential treatment does not reduce the obligation to minimize or to prevent injuries; it simply means that priority should be given to developing countries in terms of allocation of funds and services by international organizations.

202. Again in connection with the balancing of interests, article 193 of the Convention affirms the principle of the sovereign right of States to exploit their

natural resources; it thus attempts to reconcile the principle of State sovereignty with that of protection of the marine environment, which is a matter of international concern:

*Article 193. Sovereign right of States to exploit their natural resources*

States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.

This article, however, does not provide guidelines on how these competing principles and interests should be reconciled and which should prevail in case of conflict.

203. The 1982 United Nations Convention on the Law of the Sea, in defining the exclusive economic zone, grants certain rights to and imposes certain duties on coastal States. Coastal States are required, in most cases, unilaterally to take into account the rights of other States in undertaking activities within their own economic zone. The "rights" referred to relate to legally protected interests which have already been determined either by treaty or under international law. The coastal State is simply required to recognize them in a particular factual situation. Article 56 provides for the sovereign rights and jurisdiction of the coastal State over the establishment and use of artificial islands, installations and structures, marine scientific research and the protection and preservation of the marine environment. It goes on to provide that, in exercising its rights in the exclusive economic zone, the coastal State *shall have due regard to the rights and duties of other States*:

*Article 56. Rights, jurisdiction and duties of the coastal State in the exclusive economic zone*

1. In the exclusive economic zone, the coastal State has:

(a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds;

(b) jurisdiction as provided for in the relevant provisions of this Convention with regard to:

- (i) the establishment and use of artificial islands, installations and structures;
- (ii) marine scientific research;
- (iii) the protection and preservation of the marine environment;
- (c) other rights and duties provided for in this Convention.

2. In exercising its rights and performing its duties under this Convention in the exclusive economic zone, the coastal State shall have due regard to the rights and duties of other States and shall act in a manner compatible with the provisions of this Convention.

3. The rights set out in this article with respect to the sea-bed and subsoil shall be exercised in accordance with part VI.

In addition, article 58 of the Convention, dealing with the freedoms enjoyed by all States in the exclusive economic zone, namely, freedom of navigation and overflight, freedom of the laying of submarine cables and pipelines and other internationally lawful uses of the sea related to those freedoms, requires States to *have due regard to the rights and duties of the coastal State*:

*Article 58. Rights and duties of other States in the exclusive economic zone*

1. In the exclusive economic zone, all States, whether coastal or land-locked, enjoy, subject to the relevant provisions of this Conven-

tion, the freedoms referred to in article 87 of navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms, such as those associated with the operation of ships, aircraft and submarine cables and pipelines, and compatible with the other provisions of this Convention.

2. Articles 88 to 115 and other pertinent rules of international law apply to the exclusive economic zone in so far as they are not incompatible with this part.

3. In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this part.

204. Further, article 59 of the Convention provides that, in circumstances where the Convention does not attribute rights or jurisdiction to the coastal State or to other States within the exclusive economic zone, and a conflict arises, the States involved shall resolve the conflict *on the basis of equity, taking into account the importance of the interests of the parties involved as well as the interest of the larger community*:

*Article 59. Basis for the resolution of conflicts regarding the attribution of rights and jurisdiction in the exclusive economic zone*

In cases where this Convention does not attribute rights or jurisdiction to the coastal State or to other States within the exclusive economic zone, and a conflict arises between the interests of the coastal State and any other State or States, the conflict should be resolved on the basis of equity and in the light of all the relevant circumstances, taking into account the respective importance of the interests involved to the parties as well as to the international community as a whole.

In this article reference is made to “interests” and not “rights”. This broad language poses some of the difficulties stated at the beginning of the present section, namely, to determine what those interests are and how they are to be evaluated in relation to the interests of the acting State.

205. Attempts to balance and accommodate interests are also made in articles 60 and 61 of the Convention. Article 60, for example, grants competence to the coastal State to establish *inter alia* artificial islands and other structures, while stating that such installations and the safety zones around them may not be established where they could interfere with the use of recognized sea lanes essential to international navigation. The article reads:

*Article 60. Artificial islands, installations and structures in the exclusive economic zone*

1. In the exclusive economic zone, the coastal State shall have the exclusive right to construct and to authorize and regulate the construction, operation and use of:

- (a) artificial islands;
- (b) installations and structures for the purposes provided for in article 56 and other economic purposes;
- (c) installations and structures which may interfere with the exercise of the rights of the coastal State in the zone.

2. The coastal State shall have exclusive jurisdiction over such artificial islands, installations and structures, including jurisdiction with regard to customs, fiscal, health, safety and immigration laws and regulations.

3. Due notice must be given of the construction of such artificial islands, installations or structures, and permanent means for giving warning of their presence must be maintained. Any installations or structures which are abandoned or disused shall be removed to ensure

safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization. Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States. Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed.

4. The coastal State may, where necessary, establish reasonable safety zones around such artificial islands, installations and structures in which it may take appropriate measures to ensure the safety both of navigation and of the artificial islands, installations and structures.

5. The breadth of the safety zones shall be determined by the coastal State, taking into account applicable international standards. Such zones shall be designed to ensure that they are reasonably related to the nature and function of the artificial islands, installations or structures, and shall not exceed a distance of 500 metres around them, measured from each point of their outer edge, except as authorized by generally accepted international standards or as recommended by the competent international organization. Due notice shall be given of the extent of safety zones.

6. All ships must respect these safety zones and shall comply with generally accepted international standards regarding navigation in the vicinity of artificial islands, installations, structures and safety zones.

7. Artificial islands, installations and structures and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation.

8. Artificial islands, installations and structures do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea, the exclusive economic zone or the continental shelf.

206. Similarly, article 61 grants competence to coastal States to establish policies and programmes for the catch of the living resources in their exclusive economic zone. However, the article indicates that, in establishing such policies, the coastal State shall take into account certain factors, including the economic needs of coastal fishing countries and the special requirements of developing countries. The article reads:

*Article 61. Conservation of the living resources*

1. The coastal State shall determine the allowable catch of the living resources in its exclusive economic zone.

2. The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organizations, whether subregional, regional or global, shall co-operate to this end.

3. Such measures shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global.

4. In taking such measures the coastal State shall take into consideration the effects on species associated with or dependent upon harvested species, with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.

5. Available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be contributed and exchanged on a regular basis through competent international organizations, whether subregional, regional or global, where appropriate and with participation by all States concerned, including States whose nationals are allowed to fish in the exclusive economic zone.

207. With regard to the utilization of the living resources in the exclusive economic zone, article 62 pro-

vides that the coastal State must take into account the *requirements of developing States* in the region or subregion. It also provides that the coastal State must take certain steps to minimize the negative economic impact of its activities upon States whose nationals have habitually fished in the zone. Article 62 reads:

*Article 62. Utilization of the living resources*

1. The coastal State shall promote the objective of optimum utilization of the living resources in the exclusive economic zone without prejudice to article 61.

2. The coastal State shall determine its capacity to harvest the living resources of the exclusive economic zone. Where the coastal State does not have the capacity to harvest the entire allowable catch, it shall, through agreements or other arrangements and pursuant to the terms, conditions, laws and regulations referred to in paragraph 4, give other States access to the surplus of the allowable catch, having particular regard to the provisions of articles 69 and 70, especially in relation to the developing States mentioned therein.

3. In giving access to other States to its exclusive economic zone under this article, the coastal State shall take into account all relevant factors, including, *inter alia*, the significance of the living resources of the area to the economy of the coastal State concerned and its other national interests, the provisions of articles 69 and 70, the requirements of developing States in the subregion or region in harvesting part of the surplus and the need to minimize economic dislocation in States whose nationals have habitually fished in the zone or which have made substantial efforts in research and identification of stocks.

4. Nationals of other States fishing in the exclusive economic zone shall comply with the conservation measures and with the other terms and conditions established in the laws and regulations of the coastal State. These laws and regulations shall be consistent with this Convention and may relate, *inter alia*, to the following:

(a) licensing of fishermen, fishing vessels and equipment, including payment of fees and other forms of remuneration, which in the case of developing coastal States, may consist of adequate compensation in the field of financing, equipment and technology relating to the fishing industry;

(b) determining the species which may be caught, and fixing quotas of catch, whether in relation to particular stocks or groups of stocks or catch per vessel over a period of time or to the catch by nationals of any State during a specified period;

(c) regulating seasons and areas of fishing, the types, sizes and amount of gear and the types, sizes and number of fishing vessels that may be used;

(d) fixing the age and size of fish and other species that may be caught;

(e) specifying information required of fishing vessels, including catch and effort statistics and vessel position reports;

(f) requiring, under the authorization and control of the coastal State, the conduct of specified fisheries research programmes and regulating the conduct of such research, including the sampling of catches, disposition of samples and reporting of associated scientific data;

(g) the placing of observers or trainees on board such vessels by the coastal State;

(h) the landing of all or any part of the catch by such vessels in the ports of the coastal State;

(i) terms and conditions relating to joint ventures or other co-operative arrangements;

(j) requirements for the training of personnel and the transfer of fisheries technology, including enhancement of the coastal State's capability of undertaking fisheries research;

(k) enforcement procedures.

5. Coastal States shall give due notice of conservation and management laws and regulations.

*(b) Bilateral agreements*

208. The concept of balancing interests by deciding whether and under what conditions certain activities with potentially injurious effect may be undertaken is

also incorporated in certain bilateral agreements. Here the interests of the acting entities, including private entities, as well as the common interest of the States parties to an agreement, are taken into account. For example, article 4 of chapter 1 of the 1971 Agreement between Finland and Sweden concerning frontier rivers provides that, where a number of projects are involved affecting the same waters, preference shall be given to the project which may be assumed to be of the *greatest public and private benefit*. Thus, conflicting interests are to be accommodated in such a way that each may be satisfied without substantial injury to the others. Article 4 reads:

*Article 4*

In cases involving a number of different projects which affect the same waters or for some other reason cannot be carried out concurrently, preference shall be given to the project which may be assumed to be of the greatest public and private benefit. Conflicting interests shall, in so far as possible, be adjusted in such a way that each may be satisfied without substantial injury to the others.

209. Article 3 of chapter 3 of this Agreement further provides that, where any person would suffer damage or inconvenience as a result of hydraulic construction works, the works shall be carried out only if they can be shown to bring *public or private benefit*, that *substantially outweighs the inconvenience*. The same article provides that, where the injury from an activity is a *substantial deterioration in the living conditions* of the population or causes a permanent change in natural conditions which might entail *substantially diminished comfort* for people living in the vicinity or a *significant nature conservancy loss*, or where *significant public interests* would be otherwise prejudiced, the construction may be permitted only if it is of *particular importance to public interests*. This article reads:

*Article 3*

Where any person would suffer damage or inconvenience as a result of hydraulic construction works, the works shall be carried out only if they can be shown to bring public or private benefit that substantially outweighs the inconvenience.

Where the construction would result in a substantial deterioration in the living conditions of the population or cause a permanent change in natural conditions such as might entail substantially diminished comfort for people living in the vicinity or a significant nature conservancy loss or where significant public interests would be otherwise prejudiced, the construction shall be permitted only if it is of particular importance for the economy or for the locality or from some other public standpoint.

Compensation pursuant to chapter 7 shall be paid in respect of any damage or inconvenience.

210. Finally, article 5 of chapter 6 of this Agreement provides that, in deciding whether permission should be granted to undertake the activities, *equal consideration shall be given to conditions in both countries*. Thus, a site shall be selected for the operations so that the purpose can be achieved in such a way as to *cause minimum inconvenience*:

*Article 5*

Compensation pursuant to chapter 7 shall be paid in respect of any damage or inconvenience caused by the operations referred to in article 3.

In deciding whether permission should be granted for the operations, equal consideration shall be given to conditions in the two States.

A site shall be selected for the operations such that their purpose can be achieved in such a manner as to cause minimum inconvenience and without unreasonable costs.

This Agreement attempts to reconcile the public with the private interest as well as with any other interests that both countries may have.

211. The preamble to the 1983 Agreement between the United States of America and Mexico<sup>147</sup> refers to the long-term social well-being and the economic interests of the contracting parties as well as of the global community:

...  
*Recognizing the importance of a healthful environment to the long-term economic and social well-being of present and future generations of each country as well as the global community;*  
 ...

212. The 1929 Convention between Norway and Sweden relating to the law on watercourses<sup>148</sup> incorporates the concept of balance of interests in article 5, which provides that, in deciding whether a particular activity may be carried out, its *effects on both countries* shall be taken into consideration. The utility of an activity shall be considered solely in relation to the maintenance of the waterfall, or to the transport or floating interest on account of which the activity is to be carried out. Therefore, as a matter of general principle, the evaluation of any undertaking should be based on its *usefulness to the joint waters, while taking into account its effect on both countries*. The article reads:

#### Article 5

In deciding whether an undertaking may be carried out, its effects in both countries shall be taken into consideration. As a rule, however, the utility of the undertaking shall be considered to be solely its utility for the waterfall, the immovable property, or the transport or floating interest on account of which the undertaking is to be carried out.

213. The 1909 Treaty concerning the boundary waters between the United States of America and Canada<sup>149</sup> lays down a *set of preferences for use of the joint waters by each State even within its own territory*. Furthermore, it states that the International Joint Commission established by the two States may, at its discretion, approve any undertaking *conditional* upon the construction of *remedial or protective works to compensate so far as possible for the particular use or diversion proposed*. In such cases, the Commission may require that suitable and adequate provision be made for the protection and indemnity against injury of *any interests* on either side of the boundary. Article VIII of the Treaty reads:

#### Article VIII

This International Joint Commission shall have jurisdiction over and shall pass upon all cases involving the use or obstruction or diversion of the waters with respect to which, under articles III and IV of this Treaty, the approval of this Commission is required, and in passing upon such cases the Commission shall be governed by the following rules and principles which are adopted by the High Contracting Parties for this purpose:

The High Contracting Parties shall have, each on its own side of the boundary, equal and similar rights in the use of the waters hereinbefore defined as boundary waters.

The following order of precedence shall be observed among the various uses enumerated hereinafter for these waters, and no use shall be permitted which tends materially to conflict with or restrain any other use which is given preference over it in this order of precedence:

1. Uses for domestic and sanitary purposes;
2. Uses for navigation, including the service of canals for the purposes of navigation;
3. Uses for power and for irrigation purposes.

The foregoing provisions shall not apply to or disturb any existing uses of boundary waters on either side of the boundary.

The requirement for an equal division may, in the discretion of the Commission, be suspended in the cases of temporary diversions along boundary waters at points where such equal division cannot be made advantageously on account of local conditions, and where such diversion does not diminish elsewhere the amount available for use on the other side.

The Commission, in its discretion, may make its approval in any case conditional upon the construction of remedial or protective works to compensate, so far as possible, for the particular use or diversion proposed, and in such cases may require that suitable and adequate provision, approved by the Commission, be made for the protection and indemnity against injury of any interests on either side of the boundary.

In cases involving the elevation of the natural level of waters on either side of the line as a result of the construction or maintenance on the other side of remedial or protective works or dams or other obstructions in boundary waters or in waters flowing therefrom or in waters below the boundary in rivers flowing across the boundary, the Commission shall require, as a condition of its approval thereof, that suitable and adequate provision, approved by it, be made for the protection and indemnity of all interests on the other side of the line which may be injured thereby.

The majority of the Commissioners shall have power to render a decision. In case the Commission is evenly divided upon any question or matter presented to it for decision, separate reports shall be made by the Commissioners on each side to their own Government. The High Contracting Parties shall thereupon endeavour to agree upon an adjustment of the question or matter of difference, and if an agreement is reached between them, it shall be reduced to writing in the form of a protocol, and shall be communicated to the Commissioners, who shall take such further proceedings as may be necessary to carry out such agreement.

214. Under article 29 of the 1922 Treaty between Germany and Denmark concerning their frontier waters,<sup>150</sup> the Frontier Water Commission must balance the interests of the parties in the case of works on a large scale. The Commission may take certain decisions regarding the direction of the flow of the river *regardless of the opposition of the parties*, but in such cases compensation must be paid to injured individuals. The relevant provision of article 29 reads:

In the case of works on a large scale, the Frontier Water Commission may, however, direct that the water should be caused to flow round one or more properties adjacent to the watercourse, or that the water shall be discharged into another watercourse without regard to the opposition of the parties concerned. In such cases, compensation shall be granted to persons suffering prejudice for any loss and damage caused.

The second paragraph of article 26 is also aimed at accommodating the interests of the parties; it provides that the riparian proprietors must, *subject to compensation*, permit certain changes in the watercourse. Hence, when certain activities are important to the acting State and the injuries are not devastating to the injured State and can easily be compensated, the activities may be undertaken, subject to compensation. The paragraph reads:

<sup>147</sup> See footnote 16 above.

<sup>148</sup> See footnote 36 above.

<sup>149</sup> See footnote 35 above.

<sup>150</sup> See footnote 59 above.

The riparian proprietors must permit, subject to compensation, the erection at or in the watercourse of subsidiary works necessary to carry out the regularization of a river bed, the deposit of earth, stones, gravel, sand, wood, etc., on the land on the banks, the transport to and fro of such materials and the storing and transport to and fro of building materials, and must also grant regular right of access to the workmen and inspectors.

215. In some bilateral agreements, interests are balanced by the division of responsibilities between the parties. In two agreements concluded by the United States of America, one in 1963 with the Netherlands,<sup>151</sup> the other in 1964 with Italy,<sup>152</sup> concerning the use of the ports of those countries by the nuclear ship *Savannah*, the responsibilities for port security and inspection of the ship are divided between the master of the ship and the port authorities. The host Governments are responsible for taking all necessary measures for fire safety, police protection, crowd control and general provision of facilities relating to the ship's entry into port. The designated authorities of the host countries must have reasonable access to the ship for purposes of inspection to determine whether the appropriate regulations have been applied. The relevant articles of the Operational Agreement with the Netherlands are the following:

*Article 14*

Local authorities shall provide for normal fire and police protection, and crowd control and shall make general preparations in the port area for the visit of the ship.

*Article 15*

Control of public access to the ship shall be the responsibility of the master of the ship. Special arrangements relating to such control shall be made by the master with the concurrence of the authorities assigned therefor by the Netherlands Government.

INSPECTION

*Article 16*

While the ship is in Netherlands waters or in the port area of Rotterdam the authorities assigned therefor by the Netherlands Government shall have reasonable access to the ship to enable them to carry out the inspections as described in recommendation 11 of annex C to the Final Act of the International Conference on Safety of Life at Sea, 1960, and to determine whether the ship has been and is being operated in accordance with its *Safety Assessment* and its *Operating Manual*.

SECURITY

*Article 22*

As regards the security of the ship while in Netherlands waters the Netherlands Government only accepts the responsibilities it usually accepts with regard to conventional ships.

The corresponding articles of the Agreement concluded with Italy are the following:

*Article III. Port arrangements*

(a) The Italian Government shall give the competent authorities the instructions necessary for the entry of the ship into Italian ports and for the use thereof.

(b) The competent Italian authorities shall take all necessary measures for fire safety and police protection, crowd control, and the general preparation of facilities relating to the entry of the ship.

(c) Control of public access to the ship shall be the responsibility of the master of the ship. Special arrangements for such control shall be agreed upon by the master and the authorities designated by the Italian Government.

(d) The master shall comply with local regulations. If the operator or the master himself considers that the application of those regulations does not fulfil the safety requirements of operation of the

nuclear plant, the necessary measures shall be agreed upon in this connection.

(e) The Italian Government shall see to the surveillance of the areas in the vicinity of the ship, with the assistance of the Government of the United States, as mutually agreed.

*Article IV. Inspection*

While the ship is in Italian territorial waters, the designated authorities shall have reasonable access to it for purposes of inspecting the ship and its operating records and programme data, to determine whether it has been operated in accordance with the Manual of Operations.

It thus appears that, once an activity takes place within the territory of a potentially injured State, that State is responsible for local security.

*(c) Judicial decisions and State practice  
other than agreements*

216. In judicial decisions and official correspondence, the characterization of harm has been much influenced by the need to balance interests. These appears to be no fixed and definite substantive rule as to what constitutes injury; rather, there are a set of factors that are balanced against one another. In some judicial decisions regarding competing uses of shared resources, certain uses have been given priority over others. The priority of one use over others occasionally appears to have been affected by crisis conditions, such as the degree of tension and instability in international relations. For example, the United States of America and the United Kingdom, in preparing for their nuclear tests in the *Eniwetok Atoll* and *Christmas Islands* in the mid-1950s, took the position that military exercises were a traditional use of the high seas. They maintained that the danger areas which they had established, on the basis of their investigations, would prevent the occurrence of substantial losses. Finally, they claimed that the inconvenience that the tests might cause for other traditional uses of the high seas could not validly be argued against military uses, the purpose of which was not only the protection of important security interests of their respective countries but also the strengthening of the security of the "free world". Thus they unilaterally balanced their security needs against the interests of certain other States in remaining free of the health hazards caused by radioactive fallout. Security won in the balance.

217. In a note addressed on 19 March 1956 to the ambassador of Japan in Washington, the Department of State set forth the position of the United States as follows:

The United States recognizes and strongly sympathizes with the humane motivations which inspired the resolutions of the Japanese Diet, but is constrained to point out that the problem of suspending nuclear weapons tests cannot be treated separately from the establishment of a safeguarded and controlled disarmament programme.

The United States Government is convinced that the proposed nuclear tests are vital to its own defence and the defence of the free world because the possession and competence in the use of nuclear weapons by leading nations of the free world are the chief deterrent to aggression and to war. International agreement to abandon tests without effective safeguards against the clandestine development of new weapons would involve a reliance by the United States upon the good intentions of certain nations not justified by the record of their actions in the past.

The United States Government is convinced that no world-wide health hazard exists from the past or planned tests. In this connection

<sup>151</sup> See footnote 22 above.

<sup>152</sup> See footnote 20 above.

the United States proposed a resolution unanimously adopted by the United Nations tenth General Assembly establishing a scientific committee on radiation, of which Japan is a member, to facilitate pooling and distribution of all available scientific data on the effects of radiation upon man and his environment. During the forthcoming tests the United States will make every effort to eliminate any danger and to minimize any inconvenience to maritime commerce and fishing.

It cannot be regarded as established on the basis of present information that substantial economic losses will result from the establishment of the danger area. Military exercises are a traditional use of the high seas, and the Government of the United States considers that inconvenience for other traditional uses which may result therefrom is not compensable as a matter of right.

In conclusion the Acting Secretary wishes to give the assurance that the United States continues only such tests as are essential to the strength of the free world defence and security. It has sought and will continue to seek with renewed efforts a system for a safeguarded and controlled disarmament programme which ultimately may lead to the type of action envisaged by the resolutions of the Japanese Diet.<sup>153</sup>

218. The United Kingdom, in defending its nuclear tests, maintained that the temporary use of areas outside territorial waters for nuclear testing corresponded to the use of those waters for gunnery or bombing practice; such use had never been considered to be a violation of the principle of freedom of navigation on the high seas, and hence no special agreement was called for. The United Kingdom considered that, by announcing the establishment of a temporary danger area on the high seas, it was acting in the safety interest of other countries, and stated that it had tried not to interfere with regular shipping routes.<sup>154</sup>

219. Some decisions imposing the duty to balance the interests of the States parties refer to interests in general terms and leave it up to each State individually to determine which factors are to be weighed. The tribunal in the *Lake Lanoux* case took this approach:

... The Tribunal is of the opinion that, 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.<sup>155</sup>

220. The co-operation established in 1957 between the United States of America and Mexico in order to modify, in their respective interests, the plans for a highway constructed by Mexico parallel to the United States border, but without halting the progress of the work undertaken, is a clear example of the balancing of interests. As mentioned above (para. 163), the construction, as initially planned, had threatened to provoke flooding and thus of causing injury to residents and their property on the other side of the border. Realizing the importance of the construction of the highway to Mexico, the United States section of the International Boundary and Water Commission acted for two years in an engineering advisory capacity to the United States Department of State and the United States Consulate in Mexico in their discussions of the projects and safety precautions in order to ensure that the highway, once completed, did not cause injuries.<sup>156</sup> As a result of the

technical discussions, several modifications of the original plan were agreed upon.

221. The issue of tolerance of a "natural risk" was dealt with in a judicial decision in a dispute between two Swiss cantons. At the end of the first phase of the *Solothurn v. Aargau* case (1900),<sup>157</sup> the Swiss Federal Court ruled, on the basis of the applicable principles of international law, in favour of the *complete* protection of Solothurn from the risks associated with target practice at its border by the neighbouring canton of Aargau. However, at the conclusion of the second phase (1915), the Court reversed its decision and authorized the continuation of the target practice.<sup>158</sup> The Court had concluded that, despite additional safety measures, the probability of stray bullets could not be eliminated, but that the use of the range created a "practically inevitable natural risk" which must be tolerated between neighbours. The reversal of the judgment was apparently due to federal legislation passed after the first decision, which required local communities to provide military target practice facilities. Since *absolutely* safe practice facilities in the communities concerned were unavailable, the Court found that the neighbouring canton's demand for absolute protection against transboundary crossing of bullets was in conflict with the implementation of federal legislation.

222. In judicial decisions between federated States, the United State Supreme Court has referred to the *prior existence of a beneficial use* as a factor that deserves *relative* but not *absolute* protection. In the *Washington v. Oregon* case (1936),<sup>159</sup> the Supreme Court ruled:

A priority once acquired or put in course of acquisition by the posting of a notice may be lost to the claimant by abandonment or laches . . . The essence of the doctrine of prior appropriation is *beneficial use*, not a *stale* or *barren claim*. Only diligence and good faith will keep the privilege alive.\*<sup>160</sup>

223. In the *Nebraska v. Wyoming* case (1945),<sup>161</sup> while the Supreme Court acknowledged the importance of prior appropriation of waters, it held that it must be balanced against other factors and thus that that factor was not *per se* the determining element:

... Priority of appropriation is the guiding principle. But physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former—these are all relevant factors. . . .<sup>162</sup>

224. The Supreme Court has also referred to *reciprocal restraints in demands* by parties about using a shared resource. In the *New Jersey v. New York* case (1931),<sup>163</sup> the Court emphasized that, just as the upper riparian could not cut off the flow of water towards the lower riparian, the latter could not require the former to

<sup>157</sup> Judgment of 1 November 1900, *Entscheidungen des schweizerischen Bundesgerichtes*, 1900, vol. 26, part 1, p. 444.

<sup>158</sup> *Aargau v. Solothurn*, judgment of 4 February 1915, *Entscheidungen* . . . , 1915, vol. 41, part 1, p. 126.

<sup>159</sup> *United States Reports*, vol. 297, p. 517.

<sup>160</sup> *Ibid.*, p. 527.

<sup>161</sup> *Ibid.*, vol. 325, p. 589.

<sup>162</sup> *Ibid.*, p. 618.

<sup>163</sup> *Ibid.*, vol. 283, p. 336.

<sup>153</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 4, pp. 576-577.

<sup>154</sup> *Ibid.*, p. 600.

<sup>155</sup> *International Law Reports 1957* (see footnote 67 above), p. 139, para. 22 of the award.

<sup>156</sup> Whiteman, *op. cit.*, vol. 6, p. 260.

give up its interests in the river so that the river might come down to the latter undiminished.<sup>164</sup>

225. The United States Supreme Court has rejected the concept of *future use* as an element which should frustrate present equitable use. In the *Connecticut v. Massachusetts* case (1931),<sup>165</sup> the Supreme Court, after reviewing arguments supporting the granting of an injunction against a diversion by Massachusetts of waters of an interstate river, concluded:

... At most, there is a mere possibility that at some undisclosed time the owner [of an allegedly affected power station in Connecticut], were it not for the diversion, might construct additional works capable of using all of the flow of the river including the waters proposed to be taken by Massachusetts. Injunction will not issue in the absence of actual or presently threatened interference.<sup>166</sup>

226. In the same case, the United States Supreme Court also touched upon the principles of *efficient* use and *alternative* modes of resource use to avoid transboundary injuries. The Court examined in detail the possible consequences for both Connecticut and Massachusetts of feasible alternative arrangements whereby Massachusetts could have avoided a diversion of waters from an interstate stream and any possibility of conflict with the lower riparian, Connecticut.<sup>167</sup> Similarly, in the *Kansas v. Colorado* case (1907),<sup>168</sup> the Supreme Court examined the changes brought about in Kansas, the lower riparian, as a result of the appropriation of a certain portion of the flow of their shared river by Colorado. The Court stated:

... if there be many thousands of acres in Colorado destitute of vegetation, which by the taking of water from the Arkansas River and in no other way can be made valuable as arable lands producing an abundance of vegetable growth, and this transformation of desert land has the effect, through percolation of water in the soil, or in any other way, of giving to Kansas territory, although not in the Arkansas Valley, a benefit from water as great as that which would enure by keeping the flow of the Arkansas in its channel undiminished, then we may rightfully regard the usefulness to Colorado as justifying its action ...<sup>169</sup>

In the same case the Court referred to the principle of *non-discrimination* as relevant in balancing the interests of the two federated States. The Court noted:

As Kansas thus recognizes the right of appropriating the waters of a stream [within its own boundaries] for the purposes of irrigation, subject to the condition of an equitable diversion between the riparian proprietors, she cannot complain if the same rule is administered between herself and a sister State. ...<sup>170</sup>

227. The superiority of the principle of perfect equality of States over any preferential treatment was reflected in the decision of 10 September 1929 of the Permanent Court of International Justice in the *River Oder* case:

... [A] 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 use of the whole course of the river

and the exclusion of any preferential privilege of any one riparian State in relation to the others.<sup>171</sup>

If the concept of "perfect equality" refers only to the physical and geographical relationship among States and between them, on the one hand, and a shared resource on the other hand, it is then a simple and rather mechanical formula. But if it purports to consider factors of an economic, social, historical, humanitarian, etc. nature, then this concept is much too complicated.

228. The position of the International Court of Justice in two cases involving the determination of the distribution of a shared resource or its use between two or more States was not uniform. In the *Anglo-Norwegian Fisheries* case,<sup>172</sup> the Court, in deciding whether the 1935 Norwegian decree concerning the delimitation of the Norwegian fisheries zone was compatible with the principles of international law, emphasized primarily the geographical factors of the coastal configuration. After referring to some rather vague criteria to provide an adequate basis for a decision, the Court basically examined the geographical configuration of the coastal States. Although the Court referred to "practical needs and local requirements", it concluded that the drawing of baselines must not depart to any appreciable extent from the general direction of the coast. Finally, the Court mentioned *certain economic interests peculiar to a region* as relevant factors:

In this connection, certain basic considerations inherent in the nature of the territorial sea, *bring to light certain criteria which, though not entirely precise, can provide courts with an adequate basis for their decisions,\** which can be adapted to the diverse facts in question.

Among these considerations, some reference must be made to the close dependence of the territorial sea upon the land domain. It is the land which confers upon the coastal State a right to the waters off its coasts. It follows that while such a State must be allowed the latitude necessary in order to be able to adapt its delimitation to *practical needs and local requirements,\** the drawing of baselines must not depart to any appreciable extent from the general direction of the coast.

Another fundamental consideration, of particular importance in this case, is the more or less close relationship existing between certain sea areas and the land formations which divide or surround them. The real question raised in the choice of baselines is in effect whether certain sea areas lying within these lines are sufficiently closely linked to the land domain to be subject to the régime of internal waters. This idea, which is at the basis of the determination of the rules relating to bays, should be liberally applied in the case of a coast, the geographical configuration of which is as unusual as that of Norway.

Finally, there is one consideration not to be overlooked, the scope of which extends beyond purely geographical factors: that of *certain economic interests\** peculiar to a region, the reality and importance of which are clearly evidenced by a *long usage.\**<sup>173</sup>

229. Eighteen years later, in the *North Sea Continental Shelf* cases,<sup>174</sup> the Court seems to have placed less emphasis on geographical factors. In those cases, Denmark and the Netherlands claimed that the continental shelf which they shared with the Federal Republic of Germany should be delimited in accordance with article 6 of the 1958 Geneva Convention on the Continental Shelf. That article refers to "equidistance" as the ap-

<sup>164</sup> *Ibid.*, p. 342.

<sup>165</sup> *Ibid.*, vol. 282, p. 660.

<sup>166</sup> *Ibid.*, p. 673.

<sup>167</sup> *Ibid.*, pp. 668-674.

<sup>168</sup> *Ibid.*, vol. 206, p. 46.

<sup>169</sup> *Ibid.*, pp. 100-101.

<sup>170</sup> *Ibid.*, pp. 104-105.

<sup>171</sup> Case relating to the Territorial Jurisdiction of the International Commission of the River Oder, *P.C.I.J.*, Series A, No. 23, p. 27.

<sup>172</sup> *I.C.J. Reports 1951*, p. 116.

<sup>173</sup> *Ibid.*, p. 133.

<sup>174</sup> *I.C.J. Reports 1969*, p. 3.



plicable principle for the division of the continental shelf in the absence of agreement among the States, unless, or to the extent to which “special circumstances” are recognized to exist. The Court, after considering that article 6 of the Geneva Convention did not impose a mandatory obligation upon the parties, introduced the concept of “equitable principles” founded upon the principles of justice and good faith. The Court stated that geographical factors were *not the only* considerations; that there was in fact *no legal limitation to the factors to be considered* in order to make it possible to apply equitable procedures:

93. In fact, there is *no legal limit to the considerations\** which States may take account of for the purpose of making sure that they apply equitable procedures, and more often than not it is the balancing-up of all such considerations that will produce this result rather than reliance on one to the exclusion of all others. The problem of the relative weight to be accorded to different considerations naturally varies with the circumstances of the case.

94. In balancing the factors in question it would appear that various aspects must be taken into account. Some are related to the geological, others to the geographical aspect of the situation, others again to the idea of the unity of any deposits. These criteria, though not entirely precise, can provide adequate bases for decision adapted to the factual situation.

95. The institution of the continental shelf has arisen out of the recognition of a physical fact; and the link between this fact and the law, without which that institution would never have existed, remains an important element for the application of its legal régime. . . .<sup>175</sup>

230. That approach was followed more explicitly by the Court in the *Fisheries Jurisdiction* case,<sup>176</sup> in which the United Kingdom disputed Iceland’s unilateral expansion of its fisheries zone. The Court ordered the parties to take into account factors such as the *public interest of the populations* of the States involved, the *dependence of coastal populations for their livelihood* on the fishing resources of the disputed area, and consequently the interest of the parties in the *conservation and equitable exploitation* of those resources. Thus the rights and interests of the respective States varied according to their economic dependence on the resource. The Court stated that the *preferential rights of a coastal State in a particular circumstance was not a static concept*. A State’s preferential rights as a function of an exceptional dependence varied as the extent of that dependence changed. The Court further referred to two distinct interests of each of the States involved: the *livelihood of people* and *economic development*. It was essential, the Court stated, that in each case the dependence of the coastal State on the fisheries be appraised in relation to that of the other State concerned in order to design an equitable régime of exploitation of fishing resources (see paragraph 70 of the judgment, at para. 155 above). Finally, the Court held that Iceland and the United Kingdom were under the obligation to negotiate, taking into account the following factors:

- (a) that in the distribution of the fishing resources in the areas specified in subparagraph 2 Iceland is entitled to a preferential share to the extent of the special dependence of its people upon the fisheries in the seas around its coasts for their livelihood and economic development;
- (b) that by reason of its fishing activities in the areas specified in subparagraph 2, the United Kingdom also has established rights in the

fishery resources of the said areas on which elements of its people depend for their livelihood and economic well-being;

- (c) the obligation to pay due regard to the interests of other States in the conservation and equitable exploitation of these resources;
- (d) that the above-mentioned rights of Iceland and of the United Kingdom should each be given effect to the extent compatible with the conservation and development of the fishery resources in the areas specified in subparagraph 2 and with the interests of other States in their conservation and equitable exploitation;
- (e) their obligation to keep under review those resources and to examine together, in the light of scientific and other available information, such measures as may be required for the conservation and development, and equitable exploitation, of those resources, making use of the machinery established by the North-East Atlantic Fisheries Convention or such other means as may be agreed upon as a result of international negotiations.<sup>177</sup>

231. An important element that may have affected the decision of the Court in this case was the Third United Nations Conference on the Law of the Sea. The Court may not have wished to make any ruling that would have been incompatible with the Conference negotiations on the delimitation of the fishery zone. In fact, the Court in its findings asked the parties to make use in their negotiations of the machinery established by the 1959 North-East Atlantic Fisheries Convention or “such other means as may be agreed upon as a result of international negotiations”.

232. More recently, in its judgment of 24 February 1982 in the *Continental Shelf* case between Tunisia and the Libyan Arab Jamahiriya,<sup>178</sup> the International Court of Justice decided that it was bound to take a decision on the basis of *equitable principles*, “divorced from the concept of *natural\** prolongation”.<sup>179</sup> The Court further stated:

. . . The result of the application of equitable principles must be equitable. This terminology, which is generally used, is not entirely satisfactory because it employs the term equitable to characterize both the result to be achieved and the means to be applied to reach this result. It is, however, the result which is predominant, the principles are subordinate to the goal. . . .<sup>180</sup>

The Court did not identify any equitable principle, but it deemed it to be its task “to balance up the various considerations which it regards as relevant in order to produce an equitable result”.<sup>181</sup> It nevertheless sought to propose a procedure for the consideration of various factors by stating:

. . . While it is clear that no rigid rules exist as to the exact weight to be attached to each element in the case, this is very far from being an exercise of discretion or conciliation; nor is it an operation of distributive justice. . . .<sup>182</sup>

The Court stated that, in addition to giving consideration to the maritime limits claimed by both parties, it must take into account the claims to *historic rights* made by Tunisia as well as a *number of economic considerations* which one or the other party had urged as relevant.<sup>183</sup> Tunisia had emphasized its relative poverty *vis-à-vis* the Libyan Arab Jamahiriya in terms of absence of natural resources such as oil and gas, as well

<sup>175</sup> *Ibid.*, pp. 50-51.

<sup>176</sup> *I.C.J. Reports 1974*, p. 3.

<sup>177</sup> *Ibid.*, pp. 34-35, para. 79, subpara. 4, of the judgment.

<sup>178</sup> *I.C.J. Reports 1982*, p. 18.

<sup>179</sup> *Ibid.*, p. 59, para. 70 of the judgment.

<sup>180</sup> *Ibid.*, p. 60.

<sup>181</sup> *Ibid.*, p. 60, para. 71.

<sup>182</sup> *Ibid.*

<sup>183</sup> *Ibid.*, pp. 64-65, para. 82.

as its economic dependence on fishing resources derived from its "historic waters", which supplemented its national economy and enabled it to survive as a country.<sup>184</sup> The Court, however, found that those economic considerations could not be taken into account in that case, on the grounds that:

... They [these economic factors] are virtually extraneous factors since they are variables which unpredictable national fortune or calamity, as the case may be, might at any time cause to tilt the scale one way or the other. A country might be poor today and become rich tomorrow as a result of an event such as the discovery of a valuable economic resource. . . .<sup>185</sup>

233. Finally, the Court decided that the delimitation should be effected "in accordance with equitable principles, and taking into account of all relevant circumstances", those circumstances including the following:

- (1) the fact that the area relevant to the delimitation in the present case is bounded by the Tunisian coast from Ras Ajdir to Ras Kaboudia and the Libyan coast from Ras Ajdir to Ras Tajoura and by the parallel of latitude passing through Ras Kaboudia and the meridian passing through Ras Tajoura, the rights of third States being reserved;
- (2) the general configuration of the coast of the Parties, and in particular the marked change in direction of the Tunisian coastline between Ras Ajdir and Ras Kaboudia;
- (3) the existence and position of the Kerkennah Islands;
- (4) the land frontier between the Parties, and their conduct prior to 1974 in the grant of petroleum concessions, resulting in the employment of a line seawards from Ras Ajdir at an angle of approximately 26° east of the meridian, which line corresponds to the line perpendicular to the coast at the frontier point which had in the past been observed as a *de facto* maritime limit;
- (5) the element of a reasonable degree of proportionality, which a delimitation carried out in accordance with equitable principles ought to bring about between the extent of the continental shelf areas appertaining to the coastal State and the length of the relevant part of its coast, measured in the general direction of the coastlines, account being taken for this purpose of the effects, actual or prospective, of any other continental shelf delimitation between States in the same region.<sup>186</sup>

With one exception, the Court cited basically physical and geographical considerations. The exception is indicated in factor 4, which refers to "conduct prior to 1974 in the grant of petroleum concessions". The Court appears to have rejected some of the economic factors, which it had considered appropriate in its previous decisions (see paras. 228-230 above).

234. The difficulties associated with the concept of equitable principles, which do not appear to have been resolved, concern first the kind of and limit to the factors to be considered and, secondly, the value to be attached to the different factors. The decision of the Court in the *Continental Shelf* case does not appear to have resolved these questions.<sup>187</sup>

235. In its arbitral award to 30 June 1977 in the *Delimitation of the continental shelf* (Channel Islands) case,<sup>188</sup> the tribunal referred to the "equitable principle" as relevant in balancing the rights and interests of the parties in delimiting their continental shelf. In that respect it found that the claim made by the United Kingdom that, in dividing the continental shelf, account should be taken, among other considerations, of that country's responsibility for the *defence and security* of its islands in the Channel, carried a "certain weight".<sup>189</sup>

236. Precedent demonstrates that, where the interests of the parties concerned have had to be balanced in connection with a particular act or course of conduct, such balancing has been effected either by the parties jointly or by a third party. In two cases examined in this study (the nuclear tests in the *Eniwetok Atoll* and *Christmas Islands*), the acting States *unilaterally* balanced their own security interests against the interests of other States (see paras. 216 and 218 above).

237. In the *Lake Lanoux* case, the tribunal considered that the conclusion of a comprehensive agreement between the parties was the only way to achieve a balancing of the parties' interests:

... The only way to arrive at such compromises of interests is to conclude agreements on an increasingly comprehensive basis. International practice reflects the conviction that States ought to strive to conclude such agreements; there would thus appear to be an obligation to accept in good faith all communications and contacts which could, by broad comparison of interests and reciprocal good will, provide States with the best conditions for concluding agreements. . . .<sup>190</sup>

The parties were thus considered the best placed to balance their interests. Similarly, in the *North Sea Continental Shelf* cases, the International Court of Justice directed the *States parties* to take into consideration certain factors to balance their interests in delimiting the continental shelf. The States parties *voluntarily* recognized the competence of the Court to *prescribe* how the continental shelf was to be divided, while the States reserved the right to *apply* those prescriptions themselves. In the *Fisheries Jurisdiction* case, the Court ordered the parties to take into account certain factors which would ensure the balance of the parties' interests in dividing the exploitation of certain fishery resources. The *States parties* were to *apply* those prescriptions themselves. In the *Anglo-Norwegian Fisheries* case, however, the Court, with the consent of both States parties, prescribed the criteria relevant to the balancing of interests and then itself *applied* those criteria to determine whether or not Norway's unilateral action in delimiting its fisheries zone had taken into account the interests of the neighbouring State.

<sup>184</sup> *Ibid.*, p. 77, para. 106.

<sup>185</sup> *Ibid.*, para. 107.

<sup>186</sup> *Ibid.*, p. 93, para. 133.

<sup>187</sup> One of the first references to equitable principles is to be found in the proclamation made on 28 September 1945 by President Truman in connection with the policy of the United States of America in regard to the sea-bed and subsoil of the continental shelf. The proclamation refers to the "equitable principles" on the basis of which the continental shelves of adjacent States should be divided. Without defining the principle, the proclamation provides that: "where the continental shelf [of the United States] extends to the shores of another State, or is shared with an adjacent State, the boundary shall

be determined by the United States and the State concerned in accordance with equitable principles". (United States of America, *The Department of State Bulletin*, vol. XIII, No. 327, 30 September 1945, p. 485.)

<sup>188</sup> *Delimitation of the continental shelf between the United Kingdom of Great Britain and Northern Ireland and the French Republic* (United Nations, *Reports of International Arbitral Awards*, vol. XVIII, pp. 3 *et seq.*).

<sup>189</sup> *Ibid.*, pp. 93-94, paras. 197-198.

<sup>190</sup> *International Law Reports 1957* (see footnote 67 above), pp. 129-130, para. 13 of the award.

238. On occasion, the acting State, at the request of the injured State, has unilaterally decided to halt or modify the conduct of a particular hazardous activity. In 1892, French troops staged target practice exercises near the Swiss border. After Switzerland had protested that the exercises endangered a Swiss locality near the border, the French military authorities halted the exercises until steps had been taken to avoid *accidental* transboundary injuries.<sup>191</sup>

239. In the case of the construction of a highway in Mexico, the United States of America and Mexico, through negotiation, balanced their interests and agreed upon a solution, while in the case of the nuclear testing in the atmosphere by the United States and the United Kingdom in the Eniwetok Atoll and Christmas Islands, the acting States themselves balanced their own *security interests* against the interests of the affected entities. They claimed, of course, that in thus balancing those interests they had taken into account the principles of international law.

240. In connection with another series of nuclear tests, the United States unilaterally balanced its own *security* interests with those of other States. In 1971, the United States planned to conduct a third series of underground nuclear tests, named *Cannikin*,<sup>192</sup> in the Aleutian island of Amchitka. Upon the announcement of the plan, the Canadian Government protested and expressed its concern to the Government of the United States. The reason why the protest was addressed to the United States and not to other Governments engaged in underground nuclear testing at the time was, as explained by the Canadian Secretary of State for External Affairs, that these tests would have a *special effect on Canada*:

... such a test as was proposed could have a direct effect on people living on the Pacific Coast in both Canada and the United States. Indeed, such a nuclear explosion [was] to be condemned on two counts: first, it [was] a continuation of the testing and, second, because it happened to be in an area of difficult terrain where there might be untoward effects.<sup>193</sup>

Canada feared that the tests might produce a major earthquake, a tidal wave, or leakage of radioactive materials into the environment. In response to the Canadian concern, the United States assured that country that it would take full account of Canada's interests.<sup>194</sup>

#### D. Exoneration from the duty of prior negotiation

241. Under certain conditions, States may undertake activities which they know will cause extraterritorial injuries without prior consultation. Such situations may be rare, but nevertheless can occur, as for example in cases of "self-help", "self-defence" or *force majeure*. Exemption from prior negotiations or consultations does not necessarily secure exemption from all levels of

impact assessment. Depending upon the conditions under which particular activities are undertaken, the impact assessment may be carried out by different procedures appropriate to the "crisis" situation. Even during the "crisis" situation, it may be expected that some consideration will be given to minimizing injuries to others. Nor does it appear that exemption from prior consultation necessarily entails the exoneration of the acting State from liability for damage.

#### (a) Multilateral agreements

242. The 1973 Protocol relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil contains no provision requiring prior negotiation in cases of self-help. Article I reads:

##### Article I

1. Parties to the present Protocol may take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution by substances other than oil following upon a maritime casualty or acts related to such a casualty, which may reasonably be expected to result in major harmful consequences.

2. "Substances other than oil" as referred to in paragraph 1 shall be:

(a) those substances enumerated in a list which shall be established by an appropriate body designated by the Organization and which shall be annexed to the present Protocol, and

(b) those other substances which are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

3. Whenever an intervening Party takes action with regard to a substance referred to in paragraph 2 (b) above that Party shall have the burden of establishing that the substance, under the circumstances present at the time of the intervention, could reasonably pose a grave and imminent danger analogous to that posed by any of the substances enumerated in the list referred to in paragraph 2 (a) above.

The potentially injured State, of course, has the burden of establishing that the substances, under the circumstances present at the time of intervention, could reasonably *pose a grave and imminent danger* analogous to that posed by any of the substances enumerated in the Protocol.

243. The 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties sets aside the requirement of prior negotiation in cases of extreme urgency requiring measures to be taken immediately. Paragraph (d) of article III reads:

(d) in cases of extreme urgency requiring measures to be taken immediately, the coastal State may take measures rendered necessary by the urgency of the situation, without prior notification or consultation or without continuing consultations already begun;

However, under articles V and VI of the Convention, the coastal State will be responsible for injuries if its measures go beyond what is proportionate to the danger and reasonable to prevent injuries.

244. Section 5 of part XII (arts. 207-212) of the 1982 United Nations Convention on the Law of the Sea provides that States, in addition to respecting prescribed international rules, have the competence to prescribe domestic laws to prevent, reduce and control pollution of the marine environment. Section 6 (arts. 213-222) enumerates measures for enforcing the rules set out in section 5, including the requirement that coastal States adopt national legislation and take *unilateral* measures

<sup>191</sup> P. Guggenheim, "La pratique suisse (1956)", *Annuaire suisse de droit international*, 1957 (Zurich), vol. XIV, p. 168.

<sup>192</sup> See *International Canada*, Toronto, vol. 2, 1971, p. 97.

<sup>193</sup> *Ibid.*, p. 185.

<sup>194</sup> *Ibid.*, p. 199.

to enforce the principle of protection of the environment embodied in the Convention and to protect their coastal interests. In order to balance the various interests involved, article 232, while recognizing the unilateral competence of coastal States, warns against the liability they may incur if they take unlawful or unreasonable enforcement measures and cause injuries:

*Article 232. Liability of States arising from enforcement measures*

States shall be liable for damage or loss attributable to them arising from measures taken pursuant to section 6 when such measures are unlawful or exceed those reasonably required in the light of available information. States shall provide for recourse in their courts for actions in respect of such damage or loss.

Paragraph 3 of article 142 of the Convention also provides for exoneration from prior consultations, required by paragraph 2 of the same article, when coastal States have to take measures of self-help to prevent imminent danger to their coastlines:

3. Neither this part nor any rights granted or exercised pursuant thereto shall affect the rights of coastal States to take such measures consistent with the relevant provisions of part XII as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline, or related interests from pollution or threat thereof or from other hazardous occurrences resulting from or caused by any activities in the area.

*(b) Bilateral agreements*

245. Exoneration from prior negotiation concerning measures of self-help is provided for in at least two bilateral agreements examined in this study. These agreements do not remove the requirement of prior consultation and negotiation altogether, but set it aside in certain crisis situations. For example, the 1975 Agreement between Canada and the United States of America relating to weather modification activities<sup>195</sup> provides in article VI that *extreme emergencies*, such as forest fires, may require immediate commencement by one party of weather modification activities of mutual interest, notwithstanding the lack of sufficient time for prior notification or consultation as required by the Agreement. In such cases, however, the party undertaking such activities shall notify and fully inform the other party as soon as *practicable* and shall promptly enter into consultations at the request of the other party. Article VI reads:

*Article VI*

The parties recognize that extreme emergencies, such as forest fires, may require immediate commencement by one of them of weather modification activities of mutual interest notwithstanding the lack of sufficient time for prior notification pursuant to article IV, or for consultation pursuant to article V. In such cases, the party commencing such activities shall notify and fully inform the other party as soon as practicable, and shall promptly enter into consultations at the request of the other party.

246. The 1922 Treaty between Germany and Denmark concerning frontier waters<sup>196</sup> also provides that *protective* measures may be taken without prior authorization in *case of danger*. If these measures are to become permanent, then the party that has taken them must obtain authorization immediately after the danger has been averted. The last paragraph of article 29 reads:

Protective measures taken in cases of necessity when danger is threatening require no authorization. If, however, they become permanent, authorization shall be obtained when the immediate danger has been averted.

*(c) Judicial decisions and State practice other than agreements*

247. In the judicial decisions and official correspondence examined in this study, there is no instance in which exoneration from prior negotiation has been recognized. Of course, by negotiation, the present study refers in this context to any form of submission of notice regarding the commencement of an activity. For example, there might be serious question whether the general notices given by the United States of America and the United Kingdom about their nuclear tests constituted prior negotiation. Similarly, it is open to question whether the exchange of official correspondence between those States and Japan and between the United States and Canada regarding the *Cannikin* tests can be considered prior negotiations. Most probably, the correspondence between the acting and the affected States forced the acting States to re-examine their projects in the light of the objections and concerns raised by the affected States. They were not negotiations in the sense of a joint re-evaluation of the activities. At the same time, the overall reaction of Japan and Canada cannot be interpreted as their expression of consent to the procedure, nor as complete opposition to it.

248. Another ambiguity in the characterization of exoneration from prior negotiation may be observed in a communication addressed by Mexico in 1955 to the United States of America informing the Government of that country that the facilities for protection against flooding which Mexico was planning to construct might in turn cause flooding in the United States. The issue had first been raised in 1951, in a series of exchanges of official correspondence between Mexico and the United States concerning the construction of a drainage canal for the purpose of preventing the flooding caused by the collection of rain water in the *Rose Street Canal* in Douglas, in the United States. The damage annually caused by flooding to the Mexican city of Agua Prieta was *substantial*. The damage to the United States was *insignificant*. However, the facilities for protection constructed in Mexico would have reversed the flooding to the United States. Two years of negotiations concerning the construction of a dike failed to produce agreement on the plan. Finally, in a letter addressed to the United States Secretary of State on 24 March 1955, the Mexican Ambassador, after referring to the fruitless efforts Mexico had made to reach agreement with the United States, and the substantial injuries Mexico was suffering annually because of the flood, informed the United States Government that, as of 1 May of that year, the Mexican Government would begin to construct certain protective works to prevent the entry into the Mexican city of rain water collected by the Rose Street Canal, in Douglas, in the United States. Thus, Mexico informed the United States Government of the situation so that the latter might take such measures as it considered advisable to prevent consequences which the return of such water might have in the city of Douglas.<sup>197</sup> In a letter dated 12

<sup>195</sup> See footnote 16 above.

<sup>196</sup> See footnote 59 above.

<sup>197</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 6, p. 264.

May 1955 to the mayor of Douglas, the Assistant Secretary of State explicitly recognized *the right of Mexico to take protective measures at any time to prevent injuries to its territory*:

... there would seem to be no doubt that Mexico *has the right*\* to prevent water coming into Mexico through the Rose Street Canal by the construction at any time of a dike on the Mexican side of the international boundary. . . .<sup>198</sup>

The Assistant Secretary of State, however, referred to principles of international law obliging every State to

<sup>198</sup> *Ibid.*, p. 265.

respect the full sovereignty of other States and to refrain from *taking or authorizing* actions on its territory which caused injuries to another State:

... On the other hand, the principle of international law which obligates every State to respect the full sovereignty of other States and to refrain from creating or authorizing or countenancing the creation on its territory of any agency, such as the Rose Street Canal, which causes injury to another State or its inhabitants, is one of long standing and universal recognition.<sup>199</sup>

<sup>199</sup> *Ibid.*

## CHAPTER III

### Preventive measures

249: Preventive measures entail the taking of decisions in connection with harmful activities in order to prevent or minimize injuries. In the context of the concept of negligence, preventive measures are those taken in order to minimize or prevent the injurious effects of conduct involving excessive risk of harm to others. Some of these measures are of a general nature, such as would be expected of any reasonable person in the exercise of his own best judgment. Others—external measures—are required by law and entail liability for the person who is ignorant of them, regardless of his intent. In the context of inter-State relations, the acting State is obliged to carry out the measures upon which it has agreed with the injured State. Sometimes the acting State may not be required to take specific preventive measures, and to adopt them only if it deems them necessary. However, in situations where preventive measures, whether of a general nature or externally imposed, have to be taken, the acting State is not necessarily exempted from the obligation to use its best judgment. Such judgment must be that of an expert, not of a layman. The originators of acts that may produce extraterritorial consequences are specialists. Government personnel, who are normally responsible for the application of government regulations concerning certain activities of private entities, are expected to be skilled and to have special competence. It is thus in this sense that the concept of the best judgment of a reasonable person in the context of activities with extraterritorial consequences is to be interpreted.

250. Preventive measures have been developed in treaties and other forms of State practice as regards both procedure and content. At the procedural level, such measures include the process of management and monitoring, the setting up of an institution for such a function, securing its operational activities and thus ensuring the continuity and effectiveness of assessment of activities, etc. This process may be equipped to take into account new elements developed during the preparations for or the operation of potentially harmful activities. State practice demonstrates that the management and monitoring process may be undertaken by the States concerned, by a third party (including a commission) or occasionally by other entities which may be injured by the activities.

251. The content of preventive measures includes recommendations concerning changes to be made to prevent or minimize injuries or remedy damage. Recommendations or monitoring decisions may require a specific or a more general change in the process of the performance of activities. Thus they may relate to prevention or minimization of harm, or to methods to ensure payment of compensation in case of liability.

#### A. Management and monitoring

##### (a) Multilateral agreements

252. Preventive measures may involve the adoption of national legislation and other regulatory provisions. The 1982 United Nations Convention on the Law of the Sea, for example, provides, in section 5 of part XII, for international rules and national legislation to prevent, reduce and control pollution of the marine environment. Section 6 of the same part empowers coastal States themselves to take unilateral enforcement measures to enforce the principles set out in section 5 and to prevent or minimize injuries to themselves which may be caused by activities undertaken by other States. The most directly relevant article of this section is article 221 regarding measures to avoid pollution arising from maritime casualties. This article in fact grants unilateral management and monitoring competence to coastal States to take and enforce, pursuant to international law, measures beyond their territorial sea proportionate to the actual or threatened damage to protect their coastline or related interests against incidents which may reasonably be expected to result in major harmful consequences:

##### *Article 221. Measures to avoid pollution arising from maritime casualties*

1. Nothing in this part shall prejudice the right of States, pursuant to international law, both customary and conventional, to take and enforce measures beyond the territorial sea proportionate to the actual or threatened damage to protect their coastline or related interests, including fishing, from pollution or threat of pollution following upon a maritime casualty or acts relating to such a casualty, which may reasonably be expected to result in major harmful consequences.

2. For the purposes of this article, "maritime casualty" means a collision of vessels, stranding or other incident of navigation, or other

occurrence on board a vessel or external to it resulting in material damage or imminent threat of material damage to a vessel or cargo.

253. Other relevant articles of section 6 are the following:

*Article 218. Enforcement by port States*

1. When a vessel is voluntarily within a port or at an off-shore terminal of a State, that State may undertake investigations and, where the evidence so warrants, institute proceedings in respect of any discharge from that vessel outside the internal waters, territorial sea or exclusive economic zone of that State in violation of applicable international rules and standards established through the competent international organization or general diplomatic conference.

2. No proceedings pursuant to paragraph 1 shall be instituted in respect of a discharge violation in the internal waters, territorial sea or exclusive economic zone of another State unless requested by that State, the flag State, or a State damaged or threatened by the discharge violation, or unless the violation has caused or is likely to cause pollution in the internal waters, territorial sea or exclusive economic zone of the State instituting the proceedings.

3. When a vessel is voluntarily within a port or at an offshore terminal of a State, that State shall, as far as practicable comply with requests from any State for investigation of a discharge violation referred to in paragraph 1, believed to have occurred in, caused, or threatened damage to the internal waters, territorial sea or exclusive economic zone of the requesting State. It shall likewise, as far as practicable, comply with requests from the flag State for investigation of such a violation, irrespective of where the violation occurred.

4. The records of the investigation carried out by a port State pursuant to this article shall be transmitted upon request to the flag State or to the coastal State. Any proceedings instituted by the port State on the basis of such an investigation may, subject to section 7, be suspended at the request of the coastal State when the violation has occurred within its internal waters, territorial sea or exclusive economic zone. The evidence and records of the case, together with any bond or other financial security posted with the authorities of the port State, shall in that event be transmitted to the coastal State. Such transmittal shall preclude the continuation of proceedings in the port State.

*Article 219. Measures relating to seaworthiness of vessels to avoid pollution*

Subject to section 7, States which, upon request or on their own initiative, have ascertained that a vessel within one of their ports or at one of their off-shore terminals is in violation of applicable international rules and standards relating to seaworthiness of vessels and thereby threatens damage to the marine environment shall, as far as practicable, take administrative measures to prevent the vessel from sailing. Such States may permit the vessel to proceed only to the nearest appropriate repair yard and, upon removal of the causes of the violation, shall permit the vessel to continue immediately.

*Article 220. Enforcement by coastal States*

1. When a vessel is voluntarily within a port or at an off-shore terminal of a State, that State may, subject to section 7, institute proceedings in respect of any violation of its laws and regulations adopted in accordance with this Convention or applicable international rules and standards for the prevention, reduction and control of pollution from vessels when the violation has occurred within the territorial sea or the exclusive economic zone of that State.

2. Where there are clear grounds for believing that a vessel navigating in the territorial sea of a State has, during its passage therein, violated laws and regulations of that State adopted in accordance with this Convention or applicable international rules and standards for the prevention, reduction and control of pollution from vessels, that State, without prejudice to the application of the relevant provisions of part II, section 3, may undertake physical inspection of the vessel relating to the violation and may, where the evidence so warrants, institute proceedings, including detention of the vessel, in accordance with its laws, subject to the provisions of section 7.

3. Where there are clear grounds for believing that a vessel navigating in the exclusive economic zone or the territorial sea of a State has, in the exclusive economic zone, committed a violation of applicable international rules and standards for the prevention, reduction and control of pollution from vessels or laws and regulations of that State conforming and giving effect to such rules and standards, that State may require the vessel to give information regarding its identity and port of registry, its last and its next port of call and other

relevant information required to establish whether a violation has occurred.

4. States shall adopt laws and regulations and take other measures so that vessels flying their flag comply with requests for information pursuant to paragraph 3.

5. Where there are clear grounds for believing that a vessel navigating in the exclusive economic zone or the territorial sea of a State has, in the exclusive economic zone, committed a violation referred to in paragraph 3 resulting in a substantial discharge causing or threatening significant pollution of the marine environment, that State may undertake physical inspection of the vessel for matters relating to the violation if the vessel has refused to give information or if the information supplied by the vessel is manifestly at variance with the evident factual situation and if the circumstances of the case justify such inspection.

6. Where there is clear objective evidence that a vessel navigating in the exclusive economic zone or the territorial sea of a State has, in the exclusive economic zone, committed a violation referred to in paragraph 3 resulting in a discharge causing major damage or threat of major damage to the coastline or related interests of the coastal State, or to any resources of its territorial sea or exclusive economic zone, that State may, subject to section 7, provided that the evidence so warrants, institute proceedings, including detention of the vessel, in accordance with its laws.

7. Notwithstanding the provisions of paragraph 6, whenever appropriate procedures have been established, either through the competent international organization or as otherwise agreed, whereby compliance with requirements for bonding or other appropriate financial security has been assured, the coastal State if bound by such procedures shall allow the vessel to proceed.

8. The provisions of paragraphs 3, 4, 5, 6 and 7 also apply in respect of national laws and regulations adopted pursuant to article 211, paragraph 6.

254. Article 11 of the 1974 Convention for the Prevention of Marine Pollution from Land-based Sources provides for a permanent monitoring system operating through the individual or joint efforts of member States:

*Article 11*

The Contracting Parties agree to set up progressively and to operate within the area covered by the present Convention a permanent monitoring system allowing:

the earliest possible assessment of the existing level of marine pollution;

the assessment of the effectiveness of measures for the reduction of marine pollution from land-based sources taken under the terms of the present Convention.

For this purpose the Contracting Parties shall lay down the ways and means of pursuing individually or jointly systematic and *ad hoc* monitoring programmes. These programmes shall take into account the deployment of research vessels and other facilities in the monitoring area.

The programmes shall take into account similar programmes pursued in accordance with Conventions already in force and by the appropriate international organizations and agencies.

Article 11 provides for a flexible monitoring system. Parties to the Convention can set up individual or joint monitoring systems, on a continuous or on an *ad hoc* basis. These systems also require the co-operation of appropriate international organizations and agencies. In addition, the Convention establishes a Commission with overall supervision of the implementation of the Convention as well as of monitoring. Articles 15, 16 and 17 of the Convention read:

*Article 15*

A Commission composed of representatives of each of the Contracting Parties is hereby established. The Commission shall meet at regular intervals and at any time when due to special circumstances it is so decided in accordance with its rules of procedure.

### Article 16

It shall be the duty of the Commission:

(a) to exercise overall supervision over the implementation of the present Convention;

(b) to review generally the condition of the seas within the area to which the present Convention applies, the effectiveness of the control measures being adopted and the need for any additional or different measures;

(c) to fix, if necessary, on the proposal of the Contracting Party or Parties bordering on the same watercourse and following a standard procedure, the limit to which the maritime area shall extend in that watercourse;

(d) to draw up, in accordance with article 4 of the present Convention, programmes and measures for the elimination or reduction of pollution from land-based sources;

(e) to make recommendations in accordance with the provisions of article 9;

(f) to receive and review information and distribute it to the Contracting Parties in accordance with the provisions of articles 11, 12 and 17 of the present Convention;

(g) to make, in accordance with article 18, recommendations regarding any amendment to the lists of substances included in annex A to the present Convention;

(h) to discharge such other functions, as may be appropriate, under the terms of the present Convention.

### Article 17

The Contracting Parties, in accordance with a standard procedure, shall transmit to the Commission:

(a) the results of monitoring pursuant to article 11;

(b) the most detailed information available on the substances listed in the annexes to the present Convention and liable to find their way into the maritime area.

The Contracting Parties shall endeavour to improve progressively techniques for gathering such information which can contribute to the revision of the pollution reduction programmes adopted in accordance with article 4 of the present Convention.

255. Article 12 of the Convention requires the contracting States to ensure compliance with the Convention and to take appropriate domestic measures to prevent and punish conduct in contravention of its provisions; these measures may be of a legislative or administrative nature:

### Article 12

1. Each Contracting Party undertakes to ensure compliance with the provisions of this Convention and to take in its territory appropriate measures to prevent and punish conduct in contravention of the provisions of the present Convention.

2. The Contracting Parties shall inform the Commission of the legislative and administrative measures they have taken to implement the provisions of the preceding paragraph.

256. Article 13 of the Convention may also be interpreted as providing for a monitoring system. Under this article, the contracting parties must assist one another in preventing incidents that may result in pollution from land-based sources, reducing and eliminating the impact of such incidents and exchanging information to that end:

### Article 13

The Contracting Parties undertake to assist one another as appropriate to prevent incidents which may result in pollution from land-based sources, to minimize and eliminate the consequences of such incidents, and to exchange information to that end.

257. The 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and other matter requires the contracting parties to designate authorities with the competence to monitor the applica-

tion of the Convention. Article VI of the Convention reads:

### Article VI

1. Each Contracting Party shall designate an appropriate authority or authorities to:

...

(d) monitor individually, or in collaboration with other Parties and competent international organizations, the condition of the seas for the purposes of this Convention.

258. Article 3 of the 1960 Convention for the Protection of Lake Constance against Pollution also establishes a supervisory commission, whose functions are set out in article 4 (see para. 74 above).

259. A Tripartite Standing Committee was established by Belgium, France and Luxembourg under the 1950 Protocol to study and monitor problems raised by the installation in the vicinity of the frontier of explosive materials for civil use as well as problems of water pollution. One of the functions of the joint technical sub-committee established under the Protocol is to define the pollution factors, collect any appropriate technical opinions and assess each State's share of responsibility for the pollution (see para. 173 above).

260. Similarly, by an exchange of notes of 22 October 1975,<sup>200</sup> the Governments of France, the Federal Republic of Germany and Switzerland decided to create an intergovernmental commission to deal with frontier problems, and to examine environmental problems.

261. Intergovernmental commissions have also been established to study the sources of and preventive measures against pollution in the Moselle and the Rhine. The 1961 Protocol between France, the Federal Republic of Germany and Luxembourg concerning the establishment of an International Commission to protect the Moselle against pollution provides *inter alia* as follows:

### Article 2

The Commission established by virtue of article 1 is intended to ensure co-operation between the competent agencies of the three signatory Governments with a view to protecting the waters of the Moselle against pollution.

To this end, the Commission may:

(a) prepare, commission and avail itself of the results of all inquiries necessary for determining the nature, extent and origin of the pollution;

(b) propose to the signatory Governments suitable measures for protecting the Moselle against pollution.

The Commission shall also concern itself with all other matters which the signatory Governments refer to it by common agreement.

262. Similar language is used in article 2 of the 1963 Agreement concluded between Switzerland, France, the Federal Republic of Germany, Luxembourg and the Netherlands on the International Commission for the Protection of the Rhine against Pollution:

### Article 2

1. The Commission shall:

(a) prepare, commission and avail itself of the results of all investigations necessary to determine the nature, extent and origin of the pollution of the Rhine;

<sup>200</sup> Exchange of letters of 22 October 1975 between France, the Federal Republic of Germany and Switzerland constituting an agreement concerning the establishment of an Intergovernmental Commission on contiguity problems in frontier regions.



(b) propose to the signatory Governments appropriate measures to protect the Rhine against pollution;

(c) prepare the bases for possible future arrangements between the signatory Governments concerning the protection of the waters of the Rhine.

2. The Commission's competence shall also extend to all other matters which the signatory Governments refer to it by common consent.

In 1976, the European Economic Community became a party to this Agreement.<sup>201</sup>

263. Under the 1976 Convention for the Protection of the Rhine against Chemical Pollution, the aforementioned International Commission is required to monitor the chemical substances discharged into the Rhine. The Commission has to modify the list of prohibited substances and make recommendations in the light of new scientific and other developments. The following are the relevant provisions of the Convention:

#### Article 2

...

2. Pursuant to annex III, paragraph 2, the Governments shall communicate to the International Commission for the Protection of the Rhine against Pollution (hereinafter referred to as the "International Commission") the contents of their inventories, which shall be regularly updated at intervals not exceeding three years.

#### Article 5

1. The International Commission shall propose the limit values provided for in article 3, paragraph 2, and if necessary their application to discharges into sewers. These limit values shall be laid down in conformity with the procedure provided for in article 14. Upon adoption, they shall be included in annex IV.

2. These limit values are fixed in terms of:

(a) the maximum permissible concentration of a substance in discharges and,

(b) where appropriate, the maximum permissible quantity of such a substance expressed as a unit of weight of the pollutant per unit of the characteristic element of the polluting activity (e.g. unit of weight per unit of raw material or product unit).

Where appropriate, the limit values applicable to industrial effluent shall be laid down individually by sector and by type of product.

The limit values applicable to annex I substances shall be laid down mainly on the basis of:

- toxicity,
- persistence,
- bioaccumulation,

taking into account the best available technical means.

3. The International Commission shall propose to the Contracting Parties the time limits referred to in article 3, paragraph 3, making due allowance for the specific characteristics of the industrial sectors involved and, as appropriate, the types of product. These time limits shall be determined in accordance with the procedure laid down in article 14.

4. The International Commission shall use the results obtained at international measuring points to determine the extent to which the level of annex I substances in the Rhine varies following the application of the above provisions.

5. As regards the quality of Rhine water, the International Commission may if necessary propose other measures for reducing the pollution of the Rhine taking into account, *inter alia*, the toxicity, persistence and bioaccumulation of the substance under consideration. These proposals shall be adopted in accordance with the procedure laid down in article 14.

#### Article 12

1. The Contracting Parties shall regularly inform the International Commission of the experience gained in the course of implementing this Convention.

2. The International Commission shall also make recommendations, as appropriate, designed gradually to improve the implementation of this Convention.

#### Article 13

The International Commission shall work out draft recommendations for achieving comparable results by the use of appropriate measuring and analysis methods.

#### Article 14

1. Annexes I to IV inclusive, which shall form an integral part of this Convention, may be amended or added to for the purposes of adapting them to technical or scientific advances or of more effectively combating the chemical pollution of the Rhine.

2. To this end, the International Commission shall recommend the amendments or additions which it considers appropriate.

3. The amended or supplemented texts shall enter into force following unanimous acceptance by the Contracting Parties.

264. Some multilateral agreements aim only at monitoring certain activities and at co-operation in minimizing injuries without reference to issues of liability. For example, the 1969 Agreement for Co-operation in Dealing with Pollution of the North Sea by Oil is aimed at organizing immediate consultation and rapid co-operation among the signatories to combat oil pollution in the North Sea area. The relevant provisions of the Agreement are the following:

#### Article 4

Contracting Parties undertake to inform the other Contracting Parties about

(a) their national organization for dealing with oil pollution;

(b) the competent authority responsible for receiving reports of oil pollution and for dealing with questions concerning measures of mutual assistance between Contracting Parties;

(c) new ways in which oil pollution may be avoided and about new effective measures to deal with oil pollution.

#### Article 6

1. For the sole purposes of this Agreement the North Sea area is divided into the zones described in the annex to this Agreement.

2. The Contracting Party within whose zone a situation of the kind is described in article 1 occurs, shall make the necessary assessments of the nature and extent of any casualty or, as the case may be, of the type and approximate quantity of oil floating on the sea, and the direction and speed of movement of the oil.

3. The Contracting Party concerned shall immediately inform all the other Contracting Parties through their competent authorities of its assessments and of any action which it has taken to deal with the floating oil and shall keep the oil under observation as long as it is drifting in its zone.

4. The obligations of the Contracting Parties under the provisions of this article with respect to the zones of joint responsibility shall be the subject of special technical arrangements to be concluded between the Parties concerned. These arrangements shall be communicated to the other Contracting Parties.

This Agreement, whose main purpose is the institution of a co-operative monitoring system among signatory States, is not concerned with liability or compensation.

265. Similarly, article III of the 1966 International Convention for the Conservation of Atlantic Tunas establishes a commission whose functions include monitoring the conditions of tuna fishery resources and study and appraisal of information concerning methods to ensure the maintenance of the population of tuna, etc.

<sup>201</sup> See the Additional Agreement of 3 December 1976 to the Agreement of 29 April 1963 concerning the International Commission for the Protection of the Rhine against Pollution.

Article IV enumerates the Commission's functions (see para. 72 above).

266. The 1985 Vienna Convention for the Protection of the Ozone Layer also provides for a continuous and systematic research and monitoring mechanism, either through co-operation among States or through competent international organizations. The functions of this mechanism include the detection and study of phenomena that may affect the ozone layer as well as the study of the effects of the modification of that layer on human health. Article 3 of the Convention reads:

*Article 3. Research and systematic observations*

1. The Contracting Parties undertake, as appropriate, to initiate and co-operate in, directly or through competent international bodies, the conduct of research and scientific assessments on:

(a) The physical and chemical processes that may affect the ozone layer;

(b) The human health and other biological effects deriving from any modifications of the ozone layer, particularly those resulting from changes in ultra-violet solar radiation having biological effects;

(c) Climatic effects deriving from any modifications of the ozone layer;

(d) Effects deriving from any modifications of the ozone layer and any consequent change in UV-B radiation on natural and synthetic materials useful to mankind;

(e) Substances, practices, processes and activities that may affect the ozone layer, and their cumulative effects;

(f) Related socio-economic matters;

as further elaborated in annex I.

2. The Parties undertake to promote or establish, as appropriate, directly or through competent international bodies and taking fully into account national legislation and relevant ongoing activities at both the national and international levels, joint or complementary programmes for systematic observation of the state of the ozone layer and other relevant parameters, as elaborated in annex I.

3. The Parties undertake to co-operate, directly or through competent international bodies, in ensuring the collection, validation and transmission of research and observational data through appropriate world data centres in a regular and timely fashion.

The Convention is concerned only with research and monitoring, not with liability and compensation.

267. Similarly, the 1971 Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil thereof provides for a monitoring system or "verification" for compliance with treaty obligations. Such a monitoring function may be undertaken by the signatories individually or in co-operation. Nevertheless, when there are "reasonable" doubts about the fulfilment of treaty obligations, the State party which has doubts and the State party which has given rise to such doubts by its activities are under obligation to co-operate and consult with the aim of allaying them. If a State party continues to have doubts then it may, through the procedures provided under article III of the Treaty and in accordance with the provisions of the United Nations Charter, bring the matter to the attention of the Security Council, as follows:

*Article III*

1. In order to promote the objectives of and ensure compliance with the provisions of this Treaty, each State Party to the Treaty shall have the right to verify through observation the activities of other States Parties to the Treaty on the sea-bed and the ocean floor and in the subsoil thereof beyond the zone referred to in article I, provided that observation does not interfere with such activities.

2. If after such observation reasonable doubts remain concerning the fulfilment of the obligations assumed under the Treaty, the State Party having such doubts and the State Party that is responsible for the activities giving rise to the doubts shall consult with a view to removing the doubts. If the doubts persist, the State Party having such doubts shall notify the other States Parties, and the Parties concerned shall co-operate on such further procedures for verification as may be agreed, including appropriate inspection of objects, structures, installations or other facilities that reasonably may be expected to be of a kind described in article I. The Parties in the region of the activities, including any coastal State, and any other Party so requesting, shall be entitled to participate in such consultation and co-operation. After completion of the further procedures for verification, an appropriate report shall be circulated to other Parties by the Party that initiated such procedures.

3. If the State responsible for the activities giving rise to the reasonable doubts is not identifiable by observation of the object, structure, installation or other facility, the State Party having such doubts shall notify and make appropriate inquiries of States Parties in the region of the activities and of any other State Party. If it is ascertained through these inquiries that a particular State Party is responsible for the activities, that State Party shall consult and co-operate with other Parties as provided in paragraph 2 of this article. If the identity of the State responsible for the activities cannot be ascertained through these inquiries, then further verification procedures, including inspection, may be undertaken by the inquiring State Party, which shall invite the participation of the Parties in the region of the activities, including any coastal State, and of any other Party desiring to co-operate.

4. If consultation and co-operation pursuant to paragraphs 2 and 3 of this article have not removed the doubts concerning the activities and there remains a serious question concerning fulfilment of the obligations assumed under this Treaty, a State Party may, in accordance with the provisions of the Charter of the United Nations, refer the matter to the Security Council, which may take action in accordance with the Charter.

5. Verification pursuant to this Article may be undertaken by any State Party using its own means, or with the full or partial assistance of any other State Party, or through appropriate international procedures within the framework of the United Nations and in accordance with its Charter.

6. Verification activities pursuant to this Treaty shall not interfere with activities of other States Parties and shall be conducted with due regard for rights recognized under international law, including the freedoms of the high seas and the rights of coastal States with respect to the exploration and exploitation of their continental shelves.

268. Similarly, the 1976 Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques provides for a monitoring system. Under article V, consultation and co-operation among States may also take place through appropriate international organizations. Furthermore, the depositary, the United Nations, must within one month of the receipt of a request to that effect by any signatory State convene a consultative committee of experts. Any signatory may appoint an expert to the committee. The committee is a fact-finding body, which submits its findings to the depositary, which in turn has them circulated to the signatories. Article V of the Convention reads:

*Article V*

1. The States Parties to this Convention undertake to consult one another and to co-operate in solving any problems which may arise in relation to the objectives of, or in the application of the provisions of, the Convention. Consultation and co-operation pursuant to this article may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with its Charter. These international procedures may include the services of appropriate international organizations, as well as of a consultative committee of experts as provided for in paragraph 2 of this article.

2. For the purposes set forth in paragraph 1 of this article, the Depositary shall, within one month of the receipt of a request from

any State Party, convene a consultative committee of experts. Any State Party may appoint an expert to this Committee, whose functions and rules of procedures are set out in the annex, which constitutes an integral part of this Convention. The committee shall transmit to the Depositary a summary of its findings of fact, incorporating all views and information presented to the committee during its proceedings. The Depositary shall distribute the summary to all States Parties.

3. Any State Party to this Convention which has reasons to believe that any other State Party is acting in breach of obligations deriving from the provisions of the Convention may lodge a complaint with the Security Council of the United Nations. Such a complaint should include all relevant information as well as all possible evidence supporting its validity.

4. Each State Party to this Convention undertakes to co-operate in carrying out any investigation which the Security Council may initiate, in accordance with the provisions of the Charter of the United Nations, on the basis of the complaint received by the Council. The Security Council shall inform the States Parties of the results of the investigation.

5. Each State Party to this Convention undertakes to provide or support assistance, in accordance with the provisions of the Charter of the United Nations, to any Party to the Convention which so requests, if the Security Council decides that such Party has been harmed or is likely to be harmed as a result of violation of the Convention.

269. The function of the Consultative Committee of Experts and its rules of procedure are defined in the annex to the Convention, which reads:

#### ANNEX TO THE CONVENTION

##### Consultative Committee of Experts

1. The Consultative Committee of Experts shall undertake to make appropriate findings of fact and provide expert views relevant to any problem raised pursuant to article V, paragraph 1, of this Convention by the State Party requesting the convening of the Committee.

2. The work of the Consultative Committee of Experts shall be organized in such a way as to permit it to perform the functions set forth in paragraph 1 of this annex. The Committee shall decide procedural questions relative to the organization of its work, where possible by consensus, but otherwise by a majority of those present and voting. There shall be no voting on matters of substance.

3. The Depositary or his representative shall serve as the Chairman of the Committee.

4. Each expert may be assisted at meetings by one or more advisers.

5. Each expert shall have the right, through the Chairman, to request from States, and from international organizations, such information and assistance as the expert considers desirable for the accomplishment of the Committee's work.

Furthermore, each State party to the Convention undertakes to take measures within its own constitutional framework to prevent any activity within its jurisdiction or under its control in violation of the Convention. Article IV of the Convention reads:

#### Article IV

Each State Party to this Convention undertakes to take any measures it considers necessary in accordance with its constitutional processes to prohibit and prevent any activity in violation of the provisions of the Convention anywhere under its jurisdiction or control.

270. Other conventions, on the other hand, whose basic aim is prevention or reduction of injuries through monitoring and co-operation, include provisions on liability and compensation. For examples, articles 11 and 13 of the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region provide for co-operation among contracting States in monitoring activities in order to prevent injuries to the area covered by the Convention. They also provide that States shall co-operate in notification of emergencies and in provision of assistance during such situations:

#### Article 11. Co-operation in cases of emergency

1. The Contracting Parties shall co-operate in taking all necessary measures to respond to pollution emergencies in the Convention area, whatever the cause of such emergencies, and to control, reduce or eliminate pollution or the threat of pollution resulting therefrom. To this end, the Contracting Parties shall, individually and jointly, develop and promote contingency plans for responding to incidents involving pollution or the threat thereof in the Convention area.

2. When a Contracting Party becomes aware of cases in which the Convention area is in imminent danger of being polluted or has been polluted, it shall immediately notify other States likely to be affected by such pollution, as well as the competent international organizations. Furthermore, it shall inform, as soon as feasible, such other States and competent international organizations of measures it has taken to minimize or reduce pollution or the threat thereof.

#### Article 13. Scientific and technical co-operation

1. The Contracting Parties undertake to co-operate, directly and, when appropriate, through the competent international and regional organizations, in scientific research, monitoring and the exchange of data and other scientific information relating to the purposes of this Convention.

2. To this end, the Contracting Parties undertake to develop and co-ordinate their research and monitoring programmes relating to the Convention area and to ensure, in co-operation with the competent international and regional organizations, the necessary links between their research centres and institutes with a view to producing compatible results. With the aim of further protecting the Convention area, the Contracting Parties shall endeavour to participate in international arrangements for pollution research and monitoring.

3. The Contracting Parties undertake to co-operate, directly and, when appropriate, through the competent international and regional organizations, in the provision to other Contracting Parties of technical and other assistance in fields relating to pollution and sound environmental management of the Convention area, taking into account the special needs of the smaller island developing countries and territories.

It should be noted that the Convention requires, in this final paragraph, that special attention be paid to the needs of smaller island developing countries and territories in the region.

#### (b) Bilateral agreements

271. Bilateral agreements relating to the use of frontier resources usually provide for the monitoring of activities, particularly if such activities are conducted in the vicinity of the frontier and concern resources shared by the States. Some bilateral agreements also provide for the monitoring of activities unrelated to frontier resources, but in which both States parties have an interest. Such monitoring may be affected either jointly by the contracting States or through a commission.

272. Under the 1931 General Convention between Romania and Yugoslavia,<sup>202</sup> the monitoring of the operation of the hydraulic system of the frontier waters may apparently be performed by *either State*. Articles 9 and 10 of chapter I of the Convention provide that the parties agree to communicate to one another any laws or regulations in force or that may be adopted regarding the hydraulic system, the forestry system and fisheries, and that each party, at the request of the other, must supply certain data or information concerning the hydraulic system:

#### Article 9

The two States shall communicate to one another any laws or other regulations which are now in force or which may be promulgated in

<sup>202</sup> See footnote 60 above.

the future, regarding the hydraulic system, the forestry system and fisheries; they shall also communicate to one another their official periodicals concerning hydrometrical, hydrological, meteorological and geological data collected in their respective territories which may be of assistance in the study of the hydraulic system.

#### Article 10

When either State requests, for purposes of study, certain data or information regarding the hydraulic system of the other State, the latter undertakes, in the absence of any legitimate objection, to supply them.

273. By virtue of an Agreement concluded in 1983, the United States of America and Mexico<sup>203</sup> undertook to ensure the monitoring of the environment in a co-ordinated manner (see art. 6, at para. 73 above). In order to monitor polluting activities, the parties are required to consult one another on the measurement and analysis of polluting elements in the border area. Article 15, paragraph 2, of the Agreement provides:

2. In order to undertake the monitoring of polluting activities in the border area, the parties shall undertake consultations relating to the measurement and analysis of polluting elements in the border area.

274. Under the 1954 Agreement between Yugoslavia and Austria,<sup>204</sup> the *local authorities* in those countries are required to advise each other, as quickly as possible, of any danger from high water or ice or any other impending danger which comes into their notice in connection with the river Mura. Article 7 of the Agreement reads:

#### Article 7

The local authorities of the Contracting States shall advise each other, by the quickest possible means, of any danger from high water or ice and of any other impending danger which comes to their notice in connection with the Mura. The same shall apply to the frontier waters of the Mura where such dangers come to the notice of the local authorities.

275. In the 1974 Agreement between the Federal Republic of Germany and Norway relating to the transmission of petroleum by pipeline,<sup>205</sup> the monitoring of the operation is *divided between the States concerned*. The search for and removal of any mines, or other explosive devices, lying on the sea-bed route of the pipeline, or on the continental shelf or in the territorial sea of the Federal Republic of Germany, is the responsibility of the Government of that country. Paragraph 2 of article 7 of the Agreement reads:

#### Article 7

...

2. The Government of the Federal Republic of Germany is prepared, to the extent that available technical facilities are adequate and other conditions so permit, to search for and remove any mines, or other explosive devices, lying on or projecting upwards from the seabed on the pipeline route in the continental shelf or territorial sea of the Federal Republic of Germany.

276. The final safety clearance of the pipeline is the responsibility of the Norwegian Government after consultation with the Government of the Federal Republic

of Germany. Paragraph 2 of article 8 of the Agreement reads:

#### Article 8

...

2. The final safety clearance of the pipeline shall be given by the Norwegian Government after consultation with the Government of the Federal Republic of Germany on the basis of existing German and Norwegian law and this Agreement.

277. Under article 9 of the Agreement, the competent supervisory authorities of each contracting party shall have the right to inspect the pipeline facilities, including those situated within the territorial jurisdiction of the other party:

#### Article 9

1. To the extent required for the monitoring of safety regulations relating to the construction, laying and operation of the pipeline, the competent supervisory authorities of each Contracting Party shall have the right to inspect the pipeline facilities, including those situated in the continental shelf or national territory of the other State, and to obtain information for that purpose.

2. The details of the procedure shall be agreed upon by the competent supervisory authorities of the two Contracting Parties.

278. Finally, the issuance of new licences, as well as the modification of existing licences relating to the operation of the pipeline, are to be under the joint control of the two States. This is a case of joint control and monitoring of the activities of *private entities* affecting States and expressed by the extension or cancellation of the companies' licences. Under this article, *both Norway and the Federal Republic of Germany* have to agree upon the *substantive content of licences* as well as upon any alteration in or issuance of new licences. In case of serious or repeated violations of the terms of a licence, the Government concerned may revoke it, but only after prior consultation with the other Government. Control over the substantive content of licences is of course an effective means of controlling the activities of the operating entity. Article 10 of the Agreement reads:

#### Article 10

1. The substantive content of licences, including their period of validity, shall be agreed upon by the two Governments on the basis of the law in force and this Agreement.

2. A copy of the licence or licences issued by one Government shall be made available to the other Government.

3. No licences shall be altered or assigned to a new licensee by the Government concerned without prior consultation with the other Government.

4. In the event of serious or repeated violations of the terms of a licence, the Government concerned may revoke such licence but not without prior consultation with the other Government.

It should be noted that this Agreement does not relate to the utilization of a shared frontier resource but rather to an operation entailing economic benefits for both States.

279. The co-operation in management and monitoring provided for in some bilateral treaties is also aimed at *averting danger*. Article 19 of the 1950 Treaty between Hungary and the USSR,<sup>206</sup> in addition to requiring the gathering and exchange of information concerning the condition and the level of their frontier rivers in order to avert danger from floods, provides that the *parties* shall agree upon a *regular system of signals* to be used during

<sup>203</sup> See footnote 16 above.

<sup>204</sup> Agreement of 16 December 1954 between Yugoslavia and Austria concerning water economy questions in respect of the frontier sector of the Mura and the frontier waters of the Mura (Mura Agreement).

<sup>205</sup> See footnote 14 above.

<sup>206</sup> See footnote 40 above.

periods of high water or drifting ice. This Agreement does not itself establish a monitoring system, but urges the parties to agree upon such a system; information must be exchanged in a *spirit of co-operation*, and *delay or failure in communication does not constitute grounds for claims to compensation for damage* caused by flooding or drifting ice (see para. 81 above).

280. A number of other agreements provide for a system of monitoring involving advance notification of danger and the establishment of a warning system. Thus paragraph 3 of article 17 of the 1949 Agreement between Norway and the USSR<sup>207</sup> provides that, in case of forest fire, *the contracting party in whose territory the fire breaks out shall immediately notify the other party so that the necessary measures may be taken to halt the fire at the frontier*:

*Article 17*

3. If a forest fire threatens to spread across the frontier, the Contracting Party in whose territory the danger arises shall forthwith notify the other Contracting Party so that the necessary measures may be taken to stop the fire at the frontier.

281. An identical provision is included in the 1948 Agreement between the Soviet Union and Finland,<sup>208</sup> paragraph 3 of article 17 of which reads:

*Article 17*

3. If a forest fire threatens to spread across the frontier, the Contracting Party in whose territory the threat arises shall forthwith notify the other Contracting Party so that necessary measures may be taken to localize the fire.

282. Under article 11 of their 1956 Treaty,<sup>209</sup> Hungary and Austria also agree to *notify each other as quickly as possible of any danger of flood, ice or other danger arising in connection with frontier waters which comes to their attention*:

*Article 11. Warning service*

The authorities of the Contracting Parties, particularly the hydrographic service and local authorities, shall notify each other as quickly as possible of any danger of flood or ice or other danger arising in connection with frontier waters which comes to their attention.

283. By an exchange of letters, France and the Soviet Union<sup>210</sup> agreed to *notify each other immediately of any accidental occurrence or any other unexplained incident that could lead to the explosion of one of their nuclear weapons that might have harmful effects on the other party*. Provisions 1 and 2 of the letter addressed by France to the Soviet Union read:

1. Each Party undertakes to maintain and to make such improvements as it deems necessary to the organizational and technical measures taken by it to prevent the accidental or unauthorized use of any nuclear weapon under its control.

2. The two Parties undertake to notify each other immediately of any accident or any other unexplained incident which may appear to involve the possibility of the explosion of one of their nuclear weapons

<sup>207</sup> See footnote 17 above.

<sup>208</sup> Agreement of 9 December 1948 between the USSR and Finland concerning the régime of the Soviet-Finnish frontier.

<sup>209</sup> See footnote 98 above.

<sup>210</sup> Exchange of letters of 16 July 1976 between France and the USSR constituting an agreement concerning the prevention of the accidental or unauthorized use of nuclear weapons.

and may be interpreted as liable to have harmful consequences for the other Party.

284. The 1952 Agreement between Poland and the German Democratic Republic concerning navigation in frontier waters<sup>211</sup> also provides, in article 20, for mutual assistance in case of accident during blasting operations. The parties undertake to come to each other's assistance, *subject to reimbursement of the expenses entailed in the provision of such assistance*:

*Article 20*

In the event of damage or accident during blasting operations, each Party undertakes to come to the other's assistance, subject to reimbursement of the expenses entailed in the provision of such assistance.

This mutual assistance is only a part of an entire system of co-operation established between the two States in the utilization of their joint waters. Under this system, Poland and the German Democratic Republic divide the monitoring and management of their joint waters between them. Accordingly, as provided in article 21, each contracting party is required to take precautions against flooding in its own territory and, where necessary, to inform the other party of any burst in a dike; if such a burst occurs, the two parties must immediately concert their efforts to repair the damage.

285. In at least one bilateral agreement, measures for the *prevention of danger* may be taken by one State alone, while the other State *reimburses it for the cost of such preventive measures*. Thus the 1961 Treaty between Canada and the United States of America concerning the Columbia River Basin<sup>212</sup> sets out, in paragraphs 2 and 3 of article IV, the measures that Canada must take to combat flooding. Article VI of the Treaty specifies the amount of the reimbursement the United States agrees to make to Canada for its flood control measures:

*Article VI. Payment for flood control*

1. For the flood control provided by Canada under article IV (2) (a) the United States of America shall pay Canada in United States funds:

(a) 1,200,000 dollars upon the commencement of operation of the storage referred to in subparagraph (a) (i) thereof,

(b) 52,100,000 dollars upon the commencement of operation of the storage referred to in subparagraph (a) (ii) thereof, and

(c) 11,100,000 dollars upon the commencement of operation of the storage referred to in subparagraph (a) (iii) thereof.

2. If full operation of any storage is not commenced within the time specified in article IV, the amount set forth in paragraph 1 of this article with respect to that storage shall be reduced as follows:

(a) under paragraph 1 (a), 4,500 dollars for each month beyond the required time,

(b) under paragraph 1 (b), 192,100 dollars for each month beyond the required time, and

(c) under paragraph 1 (c), 40,800 dollars for each month beyond the required time.

3. For the flood control provided by Canada under article IV (2) (b) the United States of America shall pay Canada in United States funds in respect only of each of the first four flood periods for which a call is made 1,875,000 dollars and shall deliver to Canada in respect of

<sup>211</sup> Agreement of 6 February 1952 between Poland and the German Democratic Republic concerning navigation in frontier waters and the use and maintenance of frontier waters.

<sup>212</sup> Treaty of 17 January 1961 between Canada and the United States of America relating to co-operative development of the water resources of the Columbia River Basin.

each and every call made, electric power equal to the hydroelectric power lost by Canada as a result of operating the storage to meet the flood control need for which the call was made, delivery to be made when the loss of hydroelectric power occurs.

4. For each flood period for which flood control is provided by Canada under article IV (3) the United States of America shall pay Canada in United States funds:

(a) the operating cost incurred by Canada in providing the flood control, and

(b) compensation for the economic loss to Canada arising directly from Canada foregoing alternative uses of the storage used to provide the flood control.

5. Canada may elect to receive in electric power, the whole or any portion of the compensation under paragraph 4 (b) representing loss of hydroelectric power to Canada.

286. In case the causes of transboundary injuries should be disputed, neighbouring States have concluded agreements for co-operation, mutual consultation and monitoring to determine the source of the injuries. The most recent agreement of this type is the 1983 Agreement between Canada and the United States of America,<sup>213</sup> the object of which is to determine the cause of the acid rain which has produced injuries in both Canada and the United States. Under the Agreement, the two States are to monitor the flow of pollution from industrial plants in Ohio and Ontario, regarded as the prime sources of the pollution that has damaged forests on both sides of the border and destroyed fish and plant life in hundreds of lakes in the Adirondacks, in New York State, as well as in New England and eastern Canada. A scientific experiment known as *Captex*<sup>214</sup> was conducted under the Agreement and was expected to show whether the atmospheric pollutants were carried over long distances by wind currents and, if so, how they were carried.

(c) *Judicial decisions and State practice other than agreements*

287. Where States engage in potentially injurious activities, they may take preventive measures by adopting appropriate legislative or other regulatory measures.

288. Prior to and during the *Eniwetok Atoll* nuclear tests series, the United States unilaterally took preventive measures to minimize injuries and to monitor the radioactive fallout from the activity. In addition to the vast programme of scientific, technical and public health measures established in the testing area of the Eniwetok Atoll and adjacent areas (forecasts of radioactive fallout, establishment of a danger area, checking for radiation, etc.) and analysis of radioactivity in the ocean and in marine organisms as described in detail in paragraphs 84 to 89 of the present study,

<sup>213</sup> Agreement of 23 August 1983 between Canada and the United States of America to Track Air Pollution across Eastern North America (Acid Rain Research).

Canadian concern was reflected as follows:

"The Canadian Government had argued in recent years that the breadth of acid rain pollution demanded urgent action, but the Reagan Administration has maintained that there is insufficient evidence to tie the death of lakes to the flow of pollutants from industrial plants." (*The New York Times*, 24 August 1983, p. A.3, col. 4.)

<sup>214</sup> The *Captex* experiment—an acronym for Cross-Appalachian Trace Experiment—began in September 1983 and was conducted for a period of six weeks.

attention must be drawn to the study of fallout recorded in the United States and other parts of the world.

289. In the United States, the Public Health Service monitoring stations were instructed to take *daily radiation readings* and to filter samples for analysis. They were also required to report data to the health officers of the States or territories in which the stations were located. These stations were manned by trained technicians from State health departments, local universities and scientific institutions. Another network in the United States was required to gather data to be used in a long-range scientific study of the behaviour of radioactive materials in the environment and their effect on man.<sup>215</sup>

290. Samples of *dust, soil, milk, cheese and animal bones* were collected from around the world and analysed. That programme was part of a study of the world-wide distribution and uptake of radioactive fission products. Monitoring was carried out *throughout the world* in order to make an early assessment of any potential injury to human life.<sup>216</sup>

291. The United Kingdom, for its part, in connection with its hydrogen bomb tests in the *Christmas Islands* in 1957, established a monitoring system similar to that established by the United States at Eniwetok Atoll. Details of the system are given in paragraphs 90 and 91 of this report.

292. The United States also undertook unilateral monitoring of Mexican construction of a highway across the *Smugglers and Goat Canyons*. Although the United States had discussed the plans with Mexico prior to the construction of the highway, it nevertheless considered it appropriate to monitor the result of the work itself and to assess its impact upon the United States. The United States Government asked a group of engineers to analyse the blueprints in order to ascertain whether sufficient safety measures had been taken to prevent any injuries to the United States. In a letter to the Mexican Foreign Minister, the United States Ambassador to Mexico wrote:

As a result of the technical discussions, several modifications of the original plans were understood to have been agreed upon. . . . [These modifications were listed.]

It was believed by the United States engineers that these modifications would barely meet the minimum standards for such embankments.

When construction was resumed, culverts were installed at the base of the embankment at the Arroyo de las Cabras [Smugglers Canyon] but were encased in concrete only up to about two thirds of their height [instead of to a height of about four inches above the top of the culverts]. Since the culverts are now being covered with fill, it seems improbable that the State of Baja California intends to complete the encasement and erect the cutoff collars at the Arroyo de las Cabras. The remedial measures have not been started at the Arroyo de San Antonio.

In the opinion of engineers of the United States Government who are closely familiar with the recent construction, the embankment at Arroyo de San Antonio [Goat Canyon] will fail in certain circumstances of flood, and the modifications made at the Arroyo de las Cabras are not adequate to ensure its security. It too must be expected to fail in certain circumstances. Since the rainy season in that area begins as a rule in November, when considerable runoff in the arroyos must be anticipated, the matter is not only grave but urgent.

<sup>215</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 4, p. 591.

<sup>216</sup> *Ibid.*, pp. 591-592.

My Government has accordingly instructed me to urge the Government of Mexico to take appropriate steps to prevent the damage to property and the injury to persons that are likely to result from the improper construction of the highway. I urge particularly that further construction at the Arroyo de las Cabras be suspended until arrangements can be made by the Government of Mexico for adoption of features essential for the security of the embankment in that canyon, and that the embankment at the Arroyo de San Antonio be opened to prevent the accumulation of flood water pending installation of similar modifications at that canyon.<sup>217</sup>

293. Besides acting unilaterally to monitor and assess the extraterritorial impact of activities, States have in the past acted jointly in the impact monitoring process. For example, the United States acted in conjunction with Mexico to impede the spread of foot-and-mouth disease. In 1947, the two States established a joint commission for the eradication of foot-and-mouth disease (see para. 164 above) and jointly financed a campaign to combat the disease, organized by a joint office established at the same date.

294. In the *Trail Smelter* case, the tribunal prescribed the establishment of a far more detailed régime for the monitoring and management of activities with harmful extraterritorial impact. Among its various detailed provisions, the régime called for placement of permanent instruments to monitor fumes from the smelter:

#### I. Instruments

A. The instruments for recording meteorological conditions shall be as follows:

(a) Wind Direction and Wind Velocity shall be indicated by any of the standard instruments used for such purposes to provide a continuous record and shall be observed and transcribed for use of the Smoke Control Office at least once every hour.

(b) Wind Turbulence shall be measured by the Bridled Cup Turbulence Indicator. This instrument consists of a light horizontal wheel around whose periphery are twenty-two equally spaced curved surfaces cut from one-eighth inch aluminium sheet and shaped to the same-sized blades or cups. This wind-sensitive wheel is attached to an aluminium sleeve rigidly screwed to one end of a three-eighth inch vertical steel shaft supported by almost frictionless bearings at the top and bottom of the instrument frame. The shaft of the wheel is bridled to prevent continuous rotation and is so constrained that its angle of rotation is directly proportional to the square of the wind velocity. One complete revolution of the anemometer shaft corresponds to a wind velocity of 36 miles per hour and, with eighteen equally spaced contact points on the commutator, one make and one break in the circuit is equivalent to a change in wind velocity of two miles per hour, recorded on a standard anemograph. . . .

The instruments noted in (a) and (b) above, shall be located at the present site near the zinc stack of the Smelter or at some other location not less favourable for such observations.

(c) Atmospheric temperature and barometric pressure shall be determined by the standard instruments in use for such meteorological observations.

B. Sulphur dioxide concentrations shall be determined by the standard recorders, which provide automatically an accurate and continuous record of such concentrations.

One recorder shall be located at Columbia Gardens, as at present installed with arrangements for the automatic transcription of its record to the Smoke Control Office at the Smelter. A second recorder shall be maintained at the present site near Northport. A third recorder shall be maintained at the present site near Waneta, which recorder may be discontinued after December 31, 1942.<sup>218</sup>

295. Records of the data thus collected were to be kept. A summary of the smelter operation covering the daily sulphur balances was to be compiled monthly and

copies were to be sent to the Governments of the United States and the Dominion of Canada. In addition, the structure of the stacks was regulated. Sulphur dioxide was allowed to be discharged into the atmosphere from smelting operations of zinc and lead plants at a height no lower than that of the stacks at that time. In the case of cooling of the stacks by a lengthy shutdown, gases containing sulphur dioxide were not to be emitted until the stacks had been heated to normal operating temperatures by hot gases free of sulphur dioxide, and standards of maximum hourly emissions were to be carefully adhered to.<sup>219</sup>

296. The permanent régime also provided for amendment or modification of the monitoring system:

#### VI. Amendment or suspension of the régime

If at any time after December 31, 1942, either Government shall request an amendment or suspension of the régime herein prescribed and the other Government shall decline to agree to such request, there shall be appointed by each Government, within one month after the making or receipt respectively of such request, a scientist of repute; and the two scientists so appointed shall constitute a Commission for the purpose of considering and acting upon such request. If the Commission within three months after appointment fail to agree upon a decision, they shall appoint jointly a third scientist who shall be Chairman of the Commission; and thereupon the opinion of the majority, or in the absence of any majority opinion, the opinion of the Chairman shall be decisive; the opinion shall be rendered within one month after the choice of the Chairman. If the two scientists shall fail to agree upon a third scientist within the prescribed time, upon the request of either, he shall be appointed within one month from such failure by the President of the American Chemical Society, a scientific body having a membership both in the United States, Canada, Great Britain and other countries.

Any of the periods of time herein prescribed may be extended by agreement between the two Governments.

The Commission of two, or three scientists as the case may be, may take such action in compliance with or in denial of the request above referred to, either in whole or in part, as it deems appropriate for the avoidance or prevention of damage occurring in the State of Washington. The decision of the Commission shall be final, and the Governments shall take such action as may be necessary to ensure due conformity with the decision, in accordance with the provisions of article XII of the Convention.

The compensation of the scientists appointed and their reasonable expenditures shall be paid by the Government which shall have requested a decision; if both Governments shall have made a request for decision, such expenses shall be shared equally by both Governments; provided, however, that if the Commission in response to the request of the United States shall find that notwithstanding compliance with the régime in force damage has occurred through fumes in the State of Washington, then the above expenses shall be paid by the Dominion of Canada.<sup>220</sup>

The tribunal also recommended that the acting State, Canada, maintain a *scientific staff* for the purpose of *unilateral* monitoring. While the tribunal refrained from making it a part of the prescribed monitoring régime, it considered that it would be to the clear advantage of Canada if, during the interval between the date of the filing of the final report and 31 December 1942 (when the prescribed monitoring régime was to be put into effect), Canada were to continue, at its own expense, the maintenance of experimental and observational work by two scientists similar to that previously prescribed by the tribunal and which had been in operation during the trial period since 1938. The tribunal thought such continuance of investigation would pro-

<sup>217</sup> *Ibid.*, vol. 6, pp. 261-262.

<sup>218</sup> United Nations, *Reports of International Arbitral Awards*, vol. III, pp. 1974-1975.

<sup>219</sup> *Ibid.*, pp. 1975-1976.

<sup>220</sup> *Ibid.*, p. 1978.



vide additional valuable data not only for testing purposes and for the effective operation of the régime prescribed, but also in order to make it possible, if need be to improve that régime.<sup>221</sup>

297. Unilateral monitoring was also conducted by Belgium when a resort area at the mouth of the Yser, near the French frontier, was affected by air pollution, the cause of which was undetermined. The pollution had affected tourism in the area. The Belgian Parliament asked the Government to negotiate with France to resolve the problem. The Government replied that, although it was suspected that the pollution was caused by industries in Dunkirk, it did not yet have any *facts to verify* that. It stated that it was monitoring the pollution to determine its origin. Once it was sure that the pollution came from the Dunkirk region, it would take the matter up with the French Government.<sup>222</sup>

298. In a debate in the Belgian Parliament, it was stated that the Thure, an affluent of the Sambre, at the frontier between France and Belgium, was being seriously polluted by the activities of two quarries, one situated on French territory, the other on Belgian territory, whose operators were washing the rock extracted in the waters of the river. The Belgians had apparently taken some measures to reduce, but not to eliminate, the pollution caused by the operation. The French, however, had done nothing. When the issue was raised in the Belgian Parliament, the Government replied that it had taken up the matter with the French delegation to the Tripartite Standing Committee on Polluted Waters, composed of France, Belgium and Luxembourg. The Parliament, however, seemed to consider that action insufficient and expressed the wish that the Belgian Government should raise the issue directly with the French Government.<sup>223</sup>

299. States have also provided for the monitoring of an activity by a joint body. For example, in the dispute between Mexico and the United States of America concerning the *Rose Street Canal*, the United States requested the International Boundary and Water Commission to study the problems caused by that canal, on the border between the two States, and to submit a joint report as early as possible. The report was to include recommendations not only concerning remedial measures but also with respect to an equitable division of costs between the two Governments.<sup>224</sup>

## B. Provisions for prevention of harm

300. Recommendations for the prevention of injuries may require a specific or a more general change in the modes of performance of activities. In order to reduce the risk of harm arising from an activity, changes may be made in the manner in which the activity is conducted. There may be an alteration in the actual structure or

operation of the ongoing activity, a partial or occasional halt, a complete halt or an emergency back-up plan in case of unexpected occurrences. There appears to be a relation between the content of the change and the magnitude of the perceived harm from the activity.

### (a) Multilateral agreements

301. Article 4 (paras. (c) to (f)) of the 1960 Convention on the Protection of Lake Constance against Pollution enumerates the types of recommendations that the Commission may make to prevent pollution of the lake and to protect the interests of each of the riparian States (see para. 74 above).

302. Recommended changes may relate to the *structure and operation of activities*. Paragraph (c) of article XI of the 1978 Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution provides for this type of recommendation (see para. 70 above).

303. The 1949 International Convention for the North-West Atlantic Fisheries also empowers the Commission to recommend, if necessary, a catch limit and a size limit for any species or to prohibit the use of certain appliances. Paragraph 1, subparagraphs (c), (d) and (e), of article VIII read:

(c) establishing size limits for any species;

(d) prescribing the fishing gear and appliances the use of which is prohibited;

(e) prescribing an over-all catch limit for any species of fish.

304. In addition to changes in the structure and operation of activities, *partial or occasional cessation of activities* may also be recommended. For example, paragraph 1, subparagraphs (a) and (b), of the same article VIII of the Convention provides that the Commission may establish open or close seasons for catching fish or close to fishing such portions of the area as are populated by small or immature fish:

(a) establishing open and closed seasons;

(b) closing to fishing such portions of a sub-area as the Panel concerned finds to be a spawning area or to be populated by small or immature fish;

305. When injury is caused, the injured State may request the assistance of the acting State in taking certain measures in its territory to reduce the injury. For example, article XXI of the 1972 Convention on International Liability for Damage Caused by Space Objects requires the acting State—the launching State—to provide rapid assistance to the injured State when the latter so requests:

### Article XXI

If the damage caused by a space object presents a large-scale danger to human life or seriously interferes with the living conditions of the population or the functioning of vital centres, the States Parties, and in particular the launching State, shall examine the possibility of rendering appropriate and rapid assistance to the State which has suffered the damage, when it so requests. However, nothing in this article shall affect the rights or obligations of the States Parties under this Convention.

306. Article 199 of the 1982 United Nations Convention on the Law of the Sea provides for contingency plans to be designed by States as well as international organizations to combat pollution:

<sup>221</sup> *Ibid.*

<sup>222</sup> Belgian Parliament, *Questions et réponses* (Questions and answers) bulletin, 29 May 1973.

<sup>223</sup> *Ibid.*, 4 July 1973.

<sup>224</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 6, p. 264.

*Article 199. Contingency plans against pollution*

In the cases referred to in article 198, States in the area affected, in accordance with their capabilities, and the competent international organizations shall co-operate, to the extent possible, in eliminating the effects of pollution and preventing or minimizing the damage. To this end, States shall jointly develop and promote contingency plans for responding to pollution incidents in the marine environment.

307. The recommended changes may be *compulsory*. Article 6 of the 1960 Convention on the Protection of Lake Constance against Pollution requires the riparian States to do their utmost to ensure that the recommendations of the Commission are put into effect within the limits of their domestic legislation. However, the riparian State, in implementing a recommendation of the Commission, *may* recognize it as binding. Hence it appears that the compulsory nature of the recommendation depends entirely on the willingness of the acting State. Article 6 of the Convention reads:

*Article 6*

1. The riparian States undertake to give careful consideration to water protection measures recommended by the Commission which affect their territory and shall do their utmost to ensure that such measures are put into effect within the limits of their domestic legislation.

2. Riparian States in whose territory water protection measures on which the Commission makes recommendations have to be put into effect may recognize a recommendation of the Commission as being binding on them and instruct their delegation to make a statement to that effect.

308. Article VIII of the 1966 International Convention for the Conservation of Atlantic Tunas provides for an elaborate procedure for acceptance of the decisions of the Commission. If a recommendation of the Commission faces opposition by a minority of the contracting parties, that recommendation becomes *effective* for *only* those contracting parties that have not presented an objection thereto. Article VIII reads:

*Article VIII*

1. (a) The Commission may, on the basis of scientific evidence, make recommendations designed to maintain the populations of tuna and tuna-like fishes that may be taken in the Convention area at levels which will permit the maximum sustainable catch. These recommendations shall be applicable to the Contracting Parties under the conditions laid down in paragraphs 2 and 3 of this article.

(b) The recommendations referred to above shall be made:

- (i) at the initiative of the Commission if an appropriate Panel has not been established or with the approval of at least two thirds of all the Contracting Parties if an appropriate Panel has been established;
- (ii) on the proposal of an appropriate Panel if such a Panel has been established;
- (iii) on the proposal of the appropriate Panels if the recommendation in question relates to more than one geographic area, species or groups of species.

2. Each recommendation made under paragraph 1 of this article shall become effective for all Contracting Parties six months after the date of the notification from the Commission transmitting the recommendation to the Contracting Parties, except as provided in paragraph 3 of this article.

3. (a) If any Contracting Party in the case of a recommendation made under paragraph 1 (b) (i) above, or any Contracting Party member of a Panel concerned in the case of a recommendation made under paragraph 1 (b) (ii) or (iii) above, presents to the Commission an objection to such recommendation within the six months period provided for in paragraph 2 above the recommendation shall not become effective for an additional sixty days.

(b) Thereupon any other Contracting Party may present an objection prior to the expiration of the additional sixty days period, or

within forty-five days of the date of the notification of an objection made by another Contracting Party within such additional sixty days, whichever date shall be the later.

(c) The recommendation shall become effective at the end of the extended period or periods for objection, except for those Contracting Parties that have presented an objection.

(d) However, if a recommendation has met with an objection presented by only one or less than one fourth of the Contracting Parties, in accordance with subparagraphs (a) and (b) above, the Commission shall immediately notify the Contracting Party or Parties having presented such objection that it is to be considered as having no effect.

(e) In the case referred to in subparagraph (d) above the Contracting Party or Parties concerned shall have an additional period of sixty days from the date of said notification in which to reaffirm their objection. On the expiry of this period the recommendation shall become effective, except with respect to any Contracting Party having presented an objection and reaffirmed it within the delay provided for.

(f) If a recommendation has met with objection from more than one fourth but less than the majority of the Contracting Parties, in accordance with subparagraphs (a) and (b) above, the recommendation shall become effective for the Contracting Parties that have not presented an objection thereto.

(g) If objections have been presented by a majority of the Contracting Parties the recommendation shall not become effective.

4. Any Contracting party objecting to a recommendation may at any time withdraw that objection, and the recommendation shall become effective with respect to such Contracting Party immediately if the recommendation is already in effect, or at such time as it may become effective under the terms of this article.

5. The Commission shall notify each Contracting Party immediately upon receipt of each objection and of each withdrawal of an objection, and of the entry into force of any recommendation.

309. The 1969 International Convention relating to intervention on the High Seas in Cases of Oil Pollution Casualties provides, in paragraph (e) of article III, that the coastal State, before taking measures to minimize damage which may result from its action, shall "use its best endeavours . . . to afford persons in distress any assistance of which they may stand in need, and in appropriate cases to facilitate the repatriation of ships' crews, and to raise no obstacle thereto".

*(b) Bilateral agreements*

310. Some bilateral agreements provide that the acting State must notify the potentially injured State of any danger caused as a result of activities in its territory. Thus, for example, the 1971 Act of Santiago concerning hydrologic basins, signed by Argentina and Chile, provides in article 6:

6. Within a reasonable period of time, which in any case shall not exceed five months, the requested Party must indicate whether there are any aspects of the plans or plan of operations which might cause it appreciable damage. If so, it shall indicate the technical reasons and calculations substantiating that claim and shall suggest changes in the plans or plan of operations in question which would avoid such damage.

311. Again, in the 1956 Treaty between Czechoslovakia and Hungary concerning the régime of State frontiers, paragraphs 2 and 3 of article 24 read:

*Article 24*

2. If a forest fire breaks out near the frontier line, the competent authorities of the Party on whose territory the fire breaks out shall, as far as possible, do everything in their power to extinguish it and to prevent it from spreading across the State frontier.

3. If there is a danger of a forest fire spreading across the State frontier, the Party on whose territory the danger originated shall immediately warn the other Party, so that action may be taken to prevent the fire from spreading across the State frontier.

312. The 1948 Agreement between Poland and the USSR<sup>225</sup> contains similar provisions in article 19 (see para. 80 above) and in article 27, which reads:

*Article 27*

1. In sectors adjacent to the frontier line the Contracting Parties will exploit their forests in such a way as not to damage the forests of the other Party.

2. If a forest fire breaks out near the frontier, the Contracting Party on whose territory the fire breaks out must, as far as possible, do everything in its power to localize and extinguish the fire and to prevent it from spreading across the frontier.

3. Should a forest fire threaten to spread across the frontier, the Contracting Party on whose territory the danger originated shall immediately warn the other Contracting Party so that appropriate action may be taken to localize the fire on the frontier.

4. If trees fall beyond the frontier line as the result of elemental causes or logging operations, the competent authorities of the Contracting Parties shall take all steps to enable the persons concerned of the neighbouring Party to cut up and remove the trees to their own territory. The competent authorities of the Contracting Party to which the trees belong must inform the competent authorities of the other Party of such occurrences.

5. In such cases the transportation of the trees across the frontier shall be exempt from all duties or taxes.

313. Similarly, article 4 of the 1966 Convention between Belgium and France<sup>226</sup> provides for *mutual assistance* in case of *accident*, the means of assistance to be placed under a single authority:

*Article 4*

In case of accident, the Contracting Parties, being desirous of assisting each other to the greatest possible extent, shall place the means of assistance that they furnish under a single authority, which shall be responsible for the general administration of the aid and emergency action.

The provisions relating to this mutual assistance are set out in annex III.

314. Finland and Norway, in their 1951 Agreement on the transfer of water from their frontier rivers,<sup>227</sup> agreed on certain *measures* that each country must take individually in order to *offset any inconvenience* that such transfer might create for the inhabitants of the river banks. Those measures are stipulated in article 2:

*Article 2*

To offset any inconvenience which the transfer of water referred to in article 1 could cause the inhabitants along the banks of the Näätsä river, the Governments shall take the following measures:

(a) The Government of Norway shall take steps to facilitate the movement of salmon upstream past Koltaakoski on the Näätsä river so that the fish can gain access to the upper reaches of the river.

The plans for the installation shall be laid before fishery experts designated by the Government of Finland, for their opinion.

The work shall be carried out at the expense of the Government of Norway as soon as possible after the entry into force of this Agreement.

(b) The Government of Finland shall arrange for the removal of a number of large boulders and holms lying in the stretch of about four kilometres along the Näätsä river between the confluence of the Kallo and Näätsä rivers and the frontier between Finland and Norway and obstructing timber-floating.

315. Similarly, article 20 (see para. 284 above) and article 21 of the 1952 Agreement between Poland and the

German Democratic Republic<sup>228</sup> contain a recommendation for mutual assistance in case of crisis. Article 21 reads:

*Article 21*

...

If a dike bursts, the two Parties shall immediately combine their efforts to repair the damage, furnishing technical facilities and the necessary labour.

The Party which asks for assistance shall bear the cost involved.

316. In an exchange of notes in 1974, the United States of America and Canada agreed to establish joint pollution contingency plans for waters of mutual interest.<sup>229</sup> Under the 1961 Treaty between Canada and the United States of America relating to the development of the Columbia River Basin,<sup>230</sup> *each party* is required to exercise due diligence *to remove the cause and mitigate the effect of any injury* to the other's territory. Paragraph 3 of article XVIII of that Treaty reads:

*Article XVIII. Liability for damage*

...

3. Canada and the United States of America, each to the extent possible within its territory, shall exercise due diligence to remove the cause of and to mitigate the effect of any injury, damage or loss occurring in the territory of the other as a result of any act, failure to act, omission or delay under the Treaty.

...

317. The 1931 General Convention between Romania and Yugoslavia<sup>231</sup> recommends, in chapter I, article 7, that the two parties should effect *joint inspections* of the hydraulic system on their common waters:

*Article 7*

On the proposal of either State, and subject to previous consent, joint inspections of the places affected may be made from time to time for the purpose of studying the hydraulic system of the hydrotechnical areas and watercourses and their basins, in order to consider what measures are advisable or what works should be carried out for the maintenance or improvement of the hydraulic system affecting either or both of the States.

Accordingly, subject to the previous consent of both States, and on the proposal of either State, a joint inspection of affected areas may take place in order to recommend measures to improve the hydraulic system affecting either or both States.

318. In some cases, recommendations for the prevention or minimization of harm have taken the form of the *banning of certain activities at certain places*. For example, in the 1948 Agreement between the Soviet Union and Finland,<sup>232</sup> the parties agreed, in order to safeguard their joint frontier line, to establish a belt 20 metres wide within and around their border, where exploitation of mineral deposits was ordinarily to be prohibited and permitted only in exceptional cases and by agreement between the two States. Article 18 of the Agreement reads in part:

<sup>228</sup> See footnote 211 above.

<sup>229</sup> Exchange of notes of 19 June 1974 between the United States of America and Canada constituting an agreement relating to joint pollution contingency plans for spills of oil and other noxious substances in waters of mutual interest.

<sup>230</sup> See footnote 212 above.

<sup>231</sup> See footnote 60 above.

<sup>232</sup> See footnote 208 above.

<sup>225</sup> See footnote 39 above.

<sup>226</sup> See footnote 42 above.

<sup>227</sup> Agreement of 25 April 1951 between Finland and Norway on the transfer from the course of the Näätsä (Neiden) River to the course of the Gandvik River of water from the Garsjöen, Kjerringvatn and Förstevannene Lakes.

## Article 18

1. Mining and the prospecting of mineral deposits in the immediate vicinity of the frontier shall be governed by the regulations of the Party in whose territory the workings are situated.

2. In order to safeguard the frontier line there shall on each side thereof be a belt twenty metres wide within which the work referred to in paragraph 1 of this article shall ordinarily be prohibited and shall be permitted only in exceptional cases by agreement between the competent authorities of the Contracting Parties.

(c) *Judicial decisions and State practice other than agreements*

319. With regard to prevention of injury, judicial decisions and official correspondence show that, through various methods of deterrence, States and non-State entities have sought to postpone or to re-evaluate an activity. For example, in 1961, the United States decided to release 20 kilograms of tiny copper "hairs" or "needles" in outer space to form a belt around the earth about 15 kilometres wide and 30 kilometres deep. The purpose was to test the capability of the belt to intercept communications signals. The prospect of such use of the shared resource caused international as well as national concern among scientific groups about its possible adverse effects upon radiocommunications and optical astronomy. The Soviet Union also complained about possible interference with the movement of spacecraft. As a result of many protests, a special meeting of the United States President's Scientific Advisory Council (PSAC) was called to review the project and advise whether the launching should be stopped, but PSAC finally decided that the operation should be a safe undertaking. The *West Ford Test* consequently went ahead a month later.<sup>233</sup>

320. Courts have also used the procedure of *injunctions* to postpone an activity with potentially harmful consequences pending a final decision on merits. This is a fairly routine procedure in the United States with regard to environmental problems. For example, in connection with the construction of the trans-Alaska pipeline, an action by three United States conservation groups, with intervention by their Canadian counterparts, was brought before the United States District Court, District of Columbia.<sup>234</sup> The Court issued a preliminary injunction, which it subsequently dissolved; it denied a permanent injunction and dismissed the complaint.<sup>235</sup>

321. In certain cases regarding acts with extraterritorial harmful consequences, international tribunals have also granted the equivalent of injunctions. Thus at an early stage of the *Fisheries Jurisdiction* cases, the International Court of Justice, by its order of 17 August 1972, prescribed interim measures of protection which,

<sup>233</sup> See *The New York Times*, issues of 30 July 1961, p. 48, col. 1; 3 February 1962, p. 5, col. 1; 10 May 1962, p. 16, col. 4; 13 May 1963, p. 1, col. 5; 21 May 1963, p. 3, col. 1; 23 September 1963, p. 28, col. 2.

<sup>234</sup> *Wilderness Society v. Hickel* (1970) (*Federal Supplement*, 1971, vol. 325, pp. 422 and 424). See also *Natural Resources Defense Council v. Morton* (1972) (*Federal Reporter, 2nd Series*, 1972, vol. 458, p. 827).

<sup>235</sup> *Wilderness Society v. Morton* (1973) (*Federal Reporter, 2nd Series*, 1973, vol. 479, p. 842).

among other things, provided that the parties should "ensure that no action of any kind is taken which might aggravate or extend the dispute submitted to the Court" and also "ensure that no action is taken which might prejudice the rights of the other party in respect of the carrying out of whatever decision on the merits the Court may render".<sup>236</sup> The Court also held that Iceland should refrain from taking any measures to enforce its purported new fisheries regulations against ships registered in the United Kingdom or the Federal Republic of Germany outside the agreed 12-mile fisheries zone and that it should refrain from applying any administrative, judicial or other measures against such ships, their crews, or other related persons because they had engaged in fishing activities between 12 and 50 miles off-shore. For their part, the United Kingdom and the Federal Republic of Germany were directed not to take more than 170,000 and 119,000 metric tons of fish respectively from the "sea area of Iceland". Iceland, however, ignored the order.

322. A preliminary injunction was also granted by the International Court of Justice in the *Nuclear Tests* cases. By its order of 22 June 1973, the Court requested France to "avoid nuclear tests causing the deposit of radioactive fallout" over Australia and New Zealand, pending final decisions in its proceedings.<sup>237</sup>

323. State practice shows that acting States are reluctant to halt completely activities that are in their legitimate interests. However, the results of management and monitoring indicate in certain instances that a change has been made in the operation of the activity to take into account the interests of other States.

324. Following an exchange of notes, in 1961, between the United States of America and Mexico concerning two United States companies, *Peyton Packing* and *Casuco*, located near the Mexican border, whose activities were prejudicial to Mexico, the two companies took substantial measures to ensure that their operations ceased to inconvenience the Mexican border cities. Those measures included *phasing out* certain activities, *changing working hours* and establishing systems of disinfection:

The Peyton Packing Plant:

...

3. Reduced the number of cattle so that there are no more than 6,500 head in the pens at any time.

4. Constructed a system of spray heads on the fences of all four sides of the property for very high pressure dispensing of a masking agent to alleviate any remaining odour emanating from the premises.

5. Began plans which in approximately twelve months will remove all cattle feeding operations from the present area.

The Casuco Company:

1. Eliminated the rendering of partially decomposed carcasses.

2. Changed operations from night hours to day hours to take the most advantage of meteorological conditions.

3. Built an oxidizing furnace fired by natural gas to oxidize any odours from the plant operation.

4. Constructed a condenser to condense all possible vapours, which are disposed of with the liquid waste.

<sup>236</sup> *Fisheries Jurisdiction (United Kingdom v. Iceland; Federal Republic of Germany v. Iceland)*, *Interim measures of protection, Order of 17 August 1972*, *I.C.J. Reports* 1972, pp. 17 and 35.

5. Installed a system of sprays to counteract any remaining odour that might otherwise escape into the atmosphere.

With respect to industrial waste, the Peyton Packing Company constructed a primary treatment plant. It removes from the waste going into the Rio Grande all the blood and much of the solid organic matter. While this is not complete treatment, when the public sewers become available to the company, the effluent will be disposed of by that method.<sup>238</sup>

325. Similarly, the company operating the Trail Smelter undertook to contain and reduce the fumes emanating from the plant and causing damage to the State of Washington by treating the sulphur dioxide emitted:

The Consolidated Mining and Smelting Company of Canada, Limited, proceeded after 1930 to make certain changes and additions in its plant, with the intention and purpose of lessening the sulphur contents of the fumes, and in an attempt to lessen injurious fumigations, a new system of control over the emission of fumes during the crop growing season came into operation about 1934. To the three sulphuric acid plants in operation since 1932, two others have recently been added. The total capacity is now of 600 tons of sulphuric acid per day, permitting, if these units could run continually at capacity, the fixing of approximately 200 tons of sulphur per day. In addition, from 1936, units for the production of elemental sulphur have been put into operation. There are at present three such units with a total capacity of 140 tons of sulphur per day. The capacity of absorption of sulphur dioxide is now 600 tons of sulphur dioxide per day (300 tons from the zinc plant gases and 300 tons from the lead plant gases). As a result, the maximum possible recovery of sulphur dioxide, with all units in full operation has been brought to a figure which is about equal to the amount of that gas produced by smelting operations at the plant in 1939. However, the normal shutdown of operating units for repairs, the power supply, ammonia available, and the general market situation are factors which influence the amount of sulphur dioxide treated.<sup>239</sup>

326. These measures greatly lessened the amount of sulphur dioxide dispersed into the air:

In 1939, 360 tons, and in 1940, 416 tons, of sulphur per day were oxidized to sulphur dioxide in the metallurgical processes at the plant. Of the above, for 1939, 253 tons, and for 1940, 289 tons per day, of the sulphur which was oxidized to sulphur dioxide was utilized. One hundred and seven tons and 127 tons of sulphur per day for those two years, respectively, were emitted as sulphur dioxide to the atmosphere.

The tons of sulphur emitted into the air from the Trail Smelter fell from about 10,000 tons per month in 1930 to about 7,200 tons in 1931 and 3,400 tons in 1932 as a result both of sulphur dioxide beginning to be absorbed and of depressed business conditions. As depression receded, this monthly average rose in 1933 to 4,000 tons, in 1934 to nearly 6,300 tons and in 1935 to 6,800 tons. In 1936, however, it had fallen to 5,600 tons; in 1937, it further fell to 4,850 tons; in 1938, still further to 4,230 tons to reach 3,250 tons in 1939. It rose again, however, to 3,875 tons in 1940.<sup>240</sup>

327. In cases of dispute over the *distribution* and *delimitation of resources*, a régime is sometimes established to ensure the more equitable distribution of the resource between interested States. For example, in the *Fisheries Jurisdiction* cases, the parties were required to negotiate, in good faith, an equitable distribution of their fishing rights off the coast of Iceland.

328. Changes may also consist in expanding a designated danger area and giving notice of imminent danger to States or other international actors. Thus, in the Eni-

wetok Atoll nuclear tests series, after the monitoring of the activity had shown that harm might occur to others outside the initially calculated danger zone, that zone was expanded in 1953. The expansion was announced in a Notice to Mariners issued in 1954.<sup>241</sup>

329. Once it becomes evident that there is no further possibility of injuries from a particular activity, preventive measures are no longer required. Thus the maintenance of a danger zone becomes unnecessary once tests are completed and it has been established that no harm is likely to ensue from those tests in the future. That was the position taken by the United States following its nuclear tests: it stated that the personnel of Joint Task Force Seven had suffered no injuries attributable to the effects of the test; consequently, following a post-operation radiological survey of the Eniwetok-Bikini danger area, it was determined that the danger area could be disestablished without hazard. However, the land area of the Bikini and Eniwetok atolls, the water area of their lagoons and the adjacent areas within three miles to seaward of the atolls and the overlying airspace remained closed to vessels and aircraft which did not have specific clearance.<sup>242</sup>

330. In addition to the restructuring of an activity or the establishment of additional safeguards or curtailment of operations, the *partial* or *occasional* halting of the activity may be required. In the *Trail Smelter* arbitration, such a preventive measure was instituted in the event that fumes emissions exceeded well-defined limits. Guidelines were established taking into consideration agricultural activities that might be harmed by fumes emissions, whether during the growing or the non-growing season:

#### *General restrictions and provisions*

(a) If the Columbia Gardens recorder indicates 0.3 part per million or more of sulphur dioxide for two consecutive twenty-minute periods during the growing season, and the wind direction is not favourable, emission shall be reduced by four tons of sulphur per hour or shut down completely when the turbulence is bad, until the recorder shows 0.2 part per million or less of sulphur dioxide for three consecutive twenty-minute periods.

If the Columbia Gardens recorder indicates 0.5 part per million or more of sulphur dioxide for three consecutive twenty-minute periods during the non-growing season and the wind direction is not favourable, emission shall be reduced by four tons of sulphur per hour or shut down completely when the turbulence is bad, until the recorder shows 0.2 part per million or less of sulphur dioxide for three consecutive twenty-minute periods.

(b) In case of rain or snow, the emission of sulphur shall be reduced by two (2) tons per hour. This regulation shall be put into effect immediately when precipitation can be observed from the Smelter and shall be continued in effect for twenty (20) minutes after such precipitation has ceased.

(c) If the slag retreatment furnace is not in operation the emission of sulphur shall be reduced by two (2) tons per hour.

(d) If the instrumental reading shows turbulence excellent, good or fair, but visual observations made by trained observers clearly indicate that there is poor diffusion, the emission of sulphur shall be reduced to the figures given in column (1) if wind is not favourable, or column (2) if wind is favourable.

(e) When more than one of the restricting conditions provided for in (a), (b), (c) and (d) occur simultaneously, the highest reduction shall apply.

<sup>237</sup> *Nuclear Tests (Australia v. France; New Zealand v. France)*, *Interim measures of protection*, Order of 22 June 1973, I.C.J. Reports 1973, pp. 106 and 142. Less than a month after the order, France exploded another device over its Pacific atoll of Mururoa.

<sup>238</sup> Whiteman *op. cit.* (see footnote 45 above), vol. 6, pp. 258-259.

<sup>239</sup> United Nations, *Reports of International Arbitral Awards*, vol. III, p. 1946.

<sup>240</sup> *Ibid.*, pp. 1946-1948.

<sup>241</sup> Whiteman, *op. cit.*, vol. 4, pp. 560-561.

<sup>242</sup> *Ibid.*, pp. 594-595.

(f) If, during the non-growing season, the instrumental reading shows turbulence fair and wind not favourable but visual observations by trained observers clearly indicate that there is excellent diffusion, the maximum permissible emission of sulphur may be increased to the figures in column (5). The general restrictions under (a), (b), (c) and (e), however, shall be applicable.<sup>243</sup>

Notice was to be issued when the emission limits were exceeded.

331. Some activities may cause such extensive injuries that their complete prohibition is demanded, particularly if it is considered that no precautions can adequately safeguard against the perceived harm. Although this survey of judicial decisions and official correspondence has not uncovered an instance where a legitimate activity was permanently banned, requests for a total ban have been made in the area of nuclear activities. During the *Eniwetok Atoll* nuclear tests, Japan protested against atmospheric nuclear tests and called for an immediate suspension of *all tests*:

In view of this menace posed by nuclear tests to mankind and from a humanitarian standpoint, the Japanese Government and people have consistently had an earnest desire that all nuclear bomb tests be suspended immediately. This desire was stated in a note verbale sent by the Foreign Ministry to the United States Embassy in Japan on September 15, 1957, asking for the suspension of tests on Eniwetok, and also in Prime Minister Kishi's letter to President Eisenhower, dated September 24, 1957.

The Japanese Government regrets that the United States Government, in spite of the desire of the Japanese Government and people, has announced the establishment of a danger zone to conduct nuclear bomb tests. The Japanese Government takes this opportunity to request again that the United States Government consider seriously the suspension of the aforementioned tests.

The United States Government states that every possible precaution will be taken to prevent damage and injury to human lives and property in the danger zone and that there is no probability of any accidents outside the danger zone. Whatever precaution is taken, however, the Japanese Government is greatly concerned over conducting of nuclear tests and establishment of a danger zone for that purpose in view of the fact that said zone is near to routes of the Japanese merchant marine and to fishing grounds of Japanese fishing boats.<sup>244</sup>

332. In a border incident between France and Switzerland in 1892, the French Government decided to halt the military target practice exercises near the Swiss border until steps had been taken to avoid accidental transboundary injuries.<sup>245</sup>

333. Emergency back-up plans may also be requested to minimize injury in case it occurs. Such plans were in effect during the *Eniwetok Atoll* nuclear tests in the event of error in wind predictions. Those plans included immediate *evacuation* of persons and immediate *medical care*. The plans were executed when the magnitude of the 1 March 1954 test explosion had been underestimated by half and the error had been compounded by erroneous wind predictions:

The United States meanwhile took swift action to mitigate the effects of the test mishaps. Injured Marshallese were given immediate medical care at naval facilities on nearby Kwajalein Atoll; expert medical personnel were rushed to their assistance, and to that of the injured Japanese fishermen as soon as their plight became known; and prompt assurances were given that all financial loss would be made good. . . . Two million dollars have been paid to Japan for damages resulting from the tests, including both personal injuries suffered by

the crew of the *Fukuryu Maru* and damage to the Japanese fishing industry. . . .<sup>246</sup>

334. In the *Lake Lanoux* case, the tribunal noted that the potentially injured or affected State had the right to assert its interests and to demand modification of the acting State's activities. The acting State must take the affected State's proposals into consideration. Procedurally, the upstream State had a right of initiative, but it must nevertheless examine the schemes proposed by the downstream State. Of course, the upstream State had the *right* to give preference to the solution contained in its own plan, provided that it took into consideration in a *reasonable manner* the interests of the downstream State.<sup>247</sup>

335. At least one international judicial decision indicates that, upon failure by the acting State to fulfil its duty of care unilaterally or to reach agreement through negotiations with the affected State, the decision process will be subject to review by an international tribunal. In its decision in the *Trail Smelter* case, the tribunal expressly provided for recourse by the parties, in the event of failure to agree on amendment or suspension of the permanent régime, to decision-making by a joint body consisting of reputable scientists (see para. 296 above).

336. In the *Fisheries Jurisdiction* cases, the International Court of Justice stated that competence in the matter of the equitable distribution of fishery resources lay with the parties to the dispute themselves. After enumerating the factors to be considered in designing an equitable régime, the Court concluded that in that particular case "negotiation" was the most appropriate method for resolving the dispute; the decision must be based on scientific data, which were mainly in the possession of the parties:

. . . This necessitates detailed scientific knowledge of the fishing grounds. It is obvious that the relevant information and expertise would be mainly in the possession of the Parties. The Court would, for this reason, meet with difficulties if it were itself to attempt to lay down a precise scheme for an equitable adjustment of the rights involved. It is thus obvious that both in regard to merits and to jurisdiction the Court only pronounces on the case which is before it and not on any hypothetical situation which might arise in the future.<sup>248</sup>

337. Similarly, in the *Corfu Channel* case, the Court noted that the decision whether notice of a condition existing in the territorial waters of the State concerned must be given to other States depended on information uniquely within the possession of that State. The Court took note of the lack of notice and held Albania liable for failure to notify, and for the injuries resulting therefrom.

338. Again, in the *North Sea Continental Shelf* cases, the Court, quoting from the order of 19 August 1929 of the Permanent Court of International Justice in the case of the *Free Zones of Upper Savoy and the District of Gex*, stated that the judicial settlement of international disputes "is simply an alternative to the direct and friendly settlement of such disputes between the

<sup>243</sup> United Nations, *Reports of International Arbitral Awards*, vol. III, pp. 1976-1977.

<sup>244</sup> Whiteman, *op. cit.*, vol. 4, p. 585.

<sup>245</sup> See footnote 191 above.

<sup>246</sup> Whiteman, *op. cit.*, vol. 4, p. 571.

<sup>247</sup> *International Law Reports 1957* (see footnote 67 above), p. 140, para. 23 of the award.

<sup>248</sup> *I.C.J. Reports 1974*, pp. 31-32, para. 73.

parties”.<sup>249</sup> The Court added that the obligation to negotiate was emphasized by the observable fact that judicial or arbitral settlement was not universally accepted.

339. The operators of certain activities have sometimes determined for themselves what changes should be made to prevent or minimize injuries to others. In the case of the *Peyton Packing Company* and *Casuco Company* plants, the companies made changes in their activities (slaughtering and meat processing) in order to

<sup>249</sup> *I.C.J. Reports 1969*, p. 47, para. 87.

reduce the injurious effects on Mexico and its nationals; specifically, they modified the technical operations of the plants as well as the schedule of operations (see para. 324 above).

340. Similarly, the Canadian operator of the Trail Smelter took steps to diminish the emissions of fumes which were polluting the State of Washington, in particular by building additional sulphur dioxide treatment plants (see para. 325 above). However, the measures taken by the company were reviewed and added to by the arbitral tribunal in the light of the widespread damage caused in that State.

## CHAPTER IV

### Guarantees of compensation for injuries

341. When it is decided to permit the performance of certain activities, in the knowledge that they may cause injuries, it is necessary to provide, in advance, for guarantees of payment of damages. This means that the operator of certain activities must either take out an insurance policy or provide financial security. Such requirements are similar to those stipulated in the domestic laws of many States in connection with the operation of complex industries, as well as with more routine activities such as driving a car.

#### (a) *Multilateral agreements*

342. Some multilateral agreements include provisions to *ensure the payment of compensation in case of harm and liability*. Most multilateral agreements concerning nuclear activities are in this category. Thus, they require the *maintenance of insurance or other financial security* for the payment of damages in case of liability. The 1962 Convention on the Liability of Operators of Nuclear Ships requires the maintenance of such security. The terms and the amount of the insurance carried by the operator of nuclear ships are determined by the licensing State. Although the licensing State is not required to carry insurance or to provide other financial security, it must “ensure” the payment of claims for compensation for nuclear damage if the operator’s insurance or security proves to be inadequate. The relevant paragraphs of article III of the Convention read:

#### *Article III*

1. The liability of the operator as regards one nuclear ship shall be limited to 1,500 million francs in respect of any one nuclear incident, notwithstanding that the nuclear incident may have resulted from any fault or privity of that operator; such limit shall include neither any interest nor costs awarded by a court in actions for compensation under this Convention.

2. The operator shall be required to maintain insurance, or other financial security covering his liability for nuclear damage, in such amount, of such type and in such terms as the licensing State shall specify. The licensing state shall ensure the payment of claims for compensation for nuclear damage established against the operator by providing the necessary funds up to the limit laid down in paragraph 1 of this article to the extent that the yield of the insurance or the financial security is inadequate to satisfy such claims.

3. However, nothing in paragraph 2 of this article shall require any Contracting State or any of its constituent subdivisions, such as States, Republics or Cantons, to maintain insurance or other financial security to cover their liability as operators of nuclear ships.

...

343. Similar requirements are stipulated in article VII of the 1963 Vienna Convention on Civil Liability for Nuclear Damage. The operator is required to maintain an insurance or other financial security required by the installation State. While the installation State is not required to carry insurance or to provide other financial security to cover the injuries that may be caused by the operation of the nuclear plant, it must ensure the payment of claims for compensation established against the operator by providing the necessary funds if the insurance is inadequate. Article VII reads:

#### *Article VII*

1. The operator shall be required to maintain insurance or other financial security covering his liability for nuclear damage in such amount, of such type and in such terms as the Installation State shall specify. The Installation State shall ensure the payment of claims for compensation for nuclear damage which have been established against the operator by providing the necessary funds to the extent that the yield of insurance or other financial security is inadequate to satisfy such claims, but not in excess of the limit, if any, established pursuant to article V.

2. Nothing in paragraph 1 of this article shall require a Contracting Party or any of its constituent subdivisions, such as States or Republics, to maintain insurance or other financial security to cover their liability as operators.

3. The funds provided by insurance, by other financial security or by the Installation State pursuant to paragraph 1 of this article shall be exclusively available for compensation due under this Convention.

4. No insurer or other financial guarantor shall suspend or cancel the insurance or other financial security provided pursuant to paragraph 1 of this article without giving notice in writing of at least two months to the competent public authority or, in so far as such insurance or other financial security relates to the carriage of nuclear material, during the period of the carriage in question.

344. Likewise, article 10 of the 1960 Convention on Third Party Liability in the Field of Nuclear Energy requires the operator of nuclear plants to maintain insurance or provide other financial security in accordance with the Convention:



*Article 10*

(a) To cover the liability under this Convention, the operator shall be required to have and maintain insurance or other financial security of the amount established pursuant to article 7 and of such type and terms as the competent public authority shall specify.

(b) No insurer or other financial guarantor shall suspend or cancel the insurance or other financial security provided for in paragraph (a) of this article without giving notice in writing of at least two months to the competent public authority or, in so far as such insurance or other financial security relates to the carriage of nuclear substances, during the period of the carriage in question.

(c) The sums provided as insurance, reinsurance, or other financial security may be drawn upon only for compensation for damage caused by a nuclear incident.

345. In addition to conventions dealing with nuclear materials, conventions regulating other activities also require guarantees for payment of compensation in case of injury. Under article 15 of the 1952 Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface, the operators of aircraft registered in another contracting State are required to maintain insurance or provide other security for possible damage they may cause on the surface. Paragraph 4 (c) of that article provides that a contracting State may accept, instead of insurance, the guarantee of the contracting State in which the aircraft is registered, provided that that State undertakes to waive immunity from suit in respect of that guarantee. Article 15 reads:

## SECURITY FOR OPERATOR'S LIABILITY

*Article 15*

1. Any Contracting State may require that the operator of an aircraft registered in another Contracting State shall be insured in respect of his liability for damage sustained in its territory for which a right to compensation exists under article 1 by means of insurance up to the limits applicable according to the provisions of article 11.

2. (a) The insurance shall be accepted as satisfactory if it conforms to the provisions of this Convention and has been effected by an insurer authorized to effect such insurance under the laws of the State where the aircraft is registered or of the State where the insurer has his residence or principal place of business and whose financial responsibility has been verified by either of those States.

(b) If insurance has been required by any State under paragraph 1 of this article, and a final judgment in that State is not satisfied by payment in the currency of that State, any Contracting State may refuse to accept the insurer as financially responsible until such payment, if demanded, has been made.

3. Notwithstanding the last preceding paragraph, the State overflown may refuse to accept as satisfactory insurance effected by an insurer who is not authorized for that purpose in a Contracting State.

4. Instead of insurance, any of the following securities shall be deemed satisfactory if the security conforms to article 17:

(a) a cash deposit in a depository maintained by the Contracting State where the aircraft is registered or with a bank authorized to act as a depository by that State;

(b) a guarantee given by a bank authorized to do so by the Contracting State where the aircraft is registered, and whose financial responsibility has been verified by that State;

(c) a guarantee given by the Contracting State where the aircraft is registered, if that State undertakes that it will not claim immunity from suit in respect of that guarantee.

5. Subject to paragraph 6 of this article, the State overflown may also require that the aircraft shall carry a certificate issued by the insurer certifying that insurance has been effected in accordance with the provisions of this Convention, and specifying the person or persons whose liability is secured thereby, together with a certificate or endorsement issued by the appropriate authority in the State where the aircraft is registered or in the State where the insurer has his residence or principal place of business certifying the financial responsibility of the insurer. If other security is furnished in accordance with the provisions of paragraph 4 of this article, a certificate to that effect shall

be issued by the appropriate authority in the State where the aircraft is registered.

6. The certificate referred to in paragraph 5 of this article need not be carried in the aircraft if a certified copy has been filed with the appropriate authority designated by the State overflown or, if the International Civil Aviation Organization agrees, with that Organization, which shall furnish a copy of the certificate to each Contracting State.

7. (a) Where the State overflown has reasonable grounds for doubting the financial responsibility of the insurer, or of the bank which issues a guarantee under paragraph 4 of this article, that State may request additional evidence of financial responsibility, and if any question arises as to the adequacy of that evidence the dispute affecting the States concerned shall, at the request of one of those States, be submitted to an arbitral tribunal which shall be either the Council of the International Civil Aviation Organization or a person or body mutually agreed by the parties.

(b) Until this tribunal has given its decision the insurance or guarantee shall be considered provisionally valid by the State overflown.

8. Any requirements imposed in accordance with this article shall be notified to the Secretary General of the International Civil Aviation Organization who shall inform each Contracting State thereof.

9. For the purpose of this article, the term "insurer" includes a group of insurers, and for the purpose of paragraph 5 of this article, the phrase "appropriate authority in a State" includes the appropriate authority in the highest political subdivision thereof which regulates the conduct of business by the insurer.

346. Similarly, articles 11 and 11A of the draft convention prepared by IMO in 1984 on liability and compensation in connection with the carriage of noxious and hazardous substances by sea provide for compulsory insurance of the shipowner and shipper:

*Article 11. Compulsory insurance of the shipowner*

1. The owner of a ship registered in a Contracting State shall be required to maintain insurance or other financial security, such as the guarantee of a bank or a certificate delivered by an international compensation fund, in the sums fixed by applying the limits of liability prescribed in article 6 to cover his liability for damage under the present Convention. The same shall apply to a ship not registered in a Contracting State entering or leaving a port or other place for the loading or discharge of cargo [within the territory] [in an area under the jurisdiction] of a Contracting State.

2. A certificate attesting that insurance or other financial security is in force in accordance with the provisions of the present Convention shall be issued by the appropriate authority to each ship after determining that the requirements of paragraph 1 have been complied with. With respect to ships registered in a Contracting State, the certificate shall be issued or certified by the appropriate authority of the State of the ship's registration and, with respect to ships not registered in a Contracting State, the certificate shall be issued or certified by the appropriate authority of [any Contracting State] [the Contracting State referred to in the second sentence of paragraph 1] [such other Contracting State as a Contracting State may authorize]. This certificate shall be in the form of the annexed model and shall contain the following particulars:

(a) name of the ship and port of registration;

(b) name and principal place of business of the owner;

(c) type of security;

(d) name and principal place of business of insurer or other person giving security and, where appropriate, place of business where the insurance or security is established; and

(e) period of validity of certificate which shall not be longer than the period of validity of the insurance or other security.

3. The certificate shall be carried on board the ship and a copy shall be deposited with the appropriate authorities of the State of the ship's registry.

4. Insurance or other financial security shall not satisfy the requirements of this article if it can cease, for reasons other than the expiry of the period of validity of the insurance or security specified in the certificate under paragraph 2, before three months have elapsed from the date on which notice of its termination is given to the

authorities referred to in paragraph 3, unless the certificate has been surrendered to these authorities or a new certificate has been issued within the said period. The foregoing provisions shall similarly apply to any modification which results in the insurance or security no longer satisfying the requirements of this article.

5. The State where the certificate is issued or certified shall, subject to the provisions of this article and of article 11B, determine the conditions of issue and validity of the certificate.

[6. Any sums provided by insurance or by other financial security maintained in accordance with paragraph 1 shall be available only for the satisfaction of claims under the present Convention.]

*Article 11A. Compulsory insurance of the shipper*

1. The shipper of a consignment of hazardous substances shall be required to maintain insurance or other financial security, such as a bank guarantee in the sum laid down in article 8, paragraph 1, to cover his liability for damage under the present Convention.

2. A certificate attesting that insurance or other financial security is in force in accordance with the provisions of the present Convention shall be issued by the insurer or other person providing financial security for the shipper's liability with respect to each consignment. This certificate shall be delivered by the shipper to the owner when the consignment is handed over for carriage by sea.

3. This certificate shall be in the form of the annexed model and shall contain the following particulars:

(a) the name of the ship or the ships on board of which the consignment is expected to be carried and their port of registration;

(b) the name and principal place of business of the insured person;

(c) any particulars necessary for identification of the consignment; these particulars shall also contain a description of the substances which is in accordance with the requirements of any international generally accepted standards relating to sea carriage of dangerous substances;

(d) the type of security referred to in paragraph 1;

(e) the name and principal place of business of the insurer or other person giving security; and

(f) the period of validity of the insurance or other security.

4. The insurance or other financial security shall be effected with an insurer or other person providing security approved for this purpose by any Contracting State.

5. The insurance or security shall cover the entire period of the shipper's liability and shall cover the liability under the present Convention of the person named in the certificate as shipper or, if that person should not be the shipper as defined, of such person as does incur liability as shipper under the present Convention.

6. Any sums provided by insurance or by other financial security maintained in accordance with paragraph 1 shall be available only for the satisfaction of claims under the present Convention.

347. The 1969 International Convention on Civil Liability for Oil Pollution Damage requires that the owner of a ship registered in a contracting State which carries more than 2,000 tons of oil as cargo maintain insurance or other financial security. Paragraph 1 of article VII reads:

*Article VII*

1. The owner of a ship registered in a Contracting State and carrying more than 2,000 tons of oil in bulk as cargo shall be required to maintain insurance or other financial security, such as the guarantee of a bank or a certificate delivered by an international compensation fund, in the sums fixed by applying the limits of liability prescribed in article V, paragraph 1, to cover his liability for pollution damage under this Convention.

348. Again, under paragraph 1 of article 8 of the 1976 Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources, the operator of an installation is required to have and maintain insurance or other financial security to the amount and on the terms required by the controlling State.

349. Article 235 of the 1982 United Nations Convention on the Law of the Sea also provides, in paragraph 3, that States shall co-operate in developing procedures for payment of adequate compensation, such as "compulsory insurance or compensation funds".

*(b) Bilateral agreements*

350. Some bilateral agreements also take account of the need to provide for guarantees of compensation in case of injury. At least two bilateral agreements examined in the present study require such assurances. In the 1973 Agreement between Norway and the United Kingdom regarding the transmission of petroleum by pipeline from the Ekofisk field to the United Kingdom,<sup>250</sup> the licensees are *required to take out insurance or to furnish security or guarantees* in respect of possible damage, as provided in article 11:

*Article 11*

Liability for pollution damage including the costs of preventive and remedial action, shall be governed in accordance with the provisions of article 4. The licence or licences *may*\* contain conditions concerning the liability of the licensees and their obligations to insure against or to furnish security or guarantees in respect of possible pollution damage.

351. A similar provision is contained in article 12 of the 1974 Agreement between the Federal Republic of Germany and Norway for the transmission of petroleum by pipeline from the Ekofisk field to the Federal Republic of Germany,<sup>251</sup> but the terms appear to be more mandatory:

*Article 12*

Liability for pollution damage, including the costs of preventive and remedial action, shall be governed in accordance with the provisions of article 4. Licences *shall*\* contain provisions concerning the liability of the licensees and their *obligations to insure against or to furnish security or guarantees*\* in respect of possible pollution damage.

352. It should be noted that in these two agreements the operators responsible for the construction and maintenance of the pipelines are private entities.

*(c) Judicial decisions and State practice other than agreements*

353. In a few cases, a State engaged in activities entailing risks of damage to other States has unilaterally guaranteed reparation of possible damage. The United States of America has adopted legislation guaranteeing reparation for damage caused by certain nuclear incidents. On 6 December 1974, by Public Law 93-513, adopted in the form of a joint resolution of Congress, the United States assured compensation for damage that might be caused by nuclear incidents involving the nuclear reactor of a United States warship:

Whereas it is vital to the national security to facilitate the ready acceptability of United States nuclear powered warships into friendly foreign ports and harbours; and

Whereas the advent of nuclear reactors has led to various efforts throughout the world to develop an appropriate legal régime for compensating those who sustain damages in the event there should be an incident involving the operation of nuclear reactors; and

<sup>250</sup> Agreement of 22 May 1973 between Norway and the United Kingdom relating to the transmission of petroleum by pipeline from the Ekofisk field and neighbouring areas to the United Kingdom.

<sup>251</sup> See footnote 14 above.

Whereas the United States has been exercising leadership in developing legislative measures designed to assure prompt and equitable compensation in the event a nuclear incident should arise out of the operation of a nuclear reactor by the United States as is evidenced in particular by section 170 of the Atomic Energy Act of 1954, as amended; and

Whereas some form of assurance as to the prompt availability of compensation for damage in the unlikely event of a nuclear incident involving the nuclear reactor of a United States warship would, in conjunction with the unparalleled safety record that has been achieved by United States nuclear powered warships in their operation throughout the world, further the effectiveness of such warships: Now, therefore, be it

*Resolved by the Senate and House of Representatives of the United States of America in Congress assembled*, That it is the policy of the United States that it will pay claims or judgments for bodily injury, death, or damage to or loss of real or personal property proven to have resulted from a nuclear incident involving the nuclear reactor of a United States warship: *Provided*, That the injury, death, damage, or loss was not caused by the act of an armed force engaged in combat or as a result of civil insurrection. The President may authorize, under such terms and conditions as he may direct, the payment of such claims or judgments from any contingency funds available to the Government or may certify such claims or judgments to the Congress for appropriation of the necessary funds.<sup>252</sup>

354. Public Law 93-513 subsequently supplemented by Executive Order 11918, of 1 June 1976, which provided for *prompt, adequate and effective* compensation in the case of certain nuclear incidents:

By virtue of the authority vested in me by the joint resolution approved December 6, 1974 (Public Law 93-513.88 Stat. 1610.42 U.S.C.2211), and by section 301 of Title 3 of the *United States Code*, and as President of the United States of America, in order that prompt, adequate and effective compensation will be provided in the unlikely event of injury or damage resulting from a nuclear incident involving the nuclear reactor of a United States warship, it is hereby ordered as follows:

Section 1. (a) With respect to the administrative settlement of claims or judgments for bodily injury, death, or damage to or loss of real or personal property proven to have resulted from a nuclear incident involving the nuclear reactor of a United States warship, the Secretary of Defense is designated and empowered to authorize, in accord with Public Law 93-513, the payment, under such terms and conditions as he may direct, of such claims and judgments from contingency funds available to the Department of Defense.

(b) The Secretary of Defense shall, when he considers such action appropriate, certify claims or judgments described in subsection (a) and transmit to the Director of the Office of Management and Budget his recommendation with respect to appropriation by the Congress of such additional sums as may be necessary.

Sec. 2. The provisions of section 1 shall not be deemed to replace, alter, or diminish, the statutory and other functions vested in the Attorney General, or the head of any other agency, with respect to litigation against the United States and judgments and compromise settlements arising therefrom.

Sec. 3. The functions herein delegated shall be exercised in consultation with the Secretary of State in the case of any incident giving rise to a claim of a foreign country or national thereof, and, international

<sup>252</sup> Public Law 93-513, *United States Statutes at Large*, 1974, vol. 88, part 2, pp. 1610-1611.

negotiations relating to Public Law 93-513 shall be performed by or under the authority of the Secretary of State.<sup>253</sup>

355. In an exchange of notes between the United States and Spain in connection with the Treaty of friendship and co-operation concluded between them in 1976, the United States gave the assurance:

... that it will endeavour, should the need arise, to seek legislative authority to settle in a similar manner claims for bodily injury, death or damage to or loss of real or personal property proven to have resulted from a nuclear incident involving any other United States nuclear component giving rise to such claims within Spanish territory.<sup>254</sup>

In other words, the United States unilaterally expanded its liability and volunteered, if necessary, to enact legislation expressing such obligation towards Spain.

356. Similarly, a statement made by the United States Department of State in connection with weather modification activities also speaks of advance agreements with potential victim States. In connection with the 1966 hearings before the United States Senate on pending legislation concerning a programme to increase usable precipitation in the United States, the State Department made the following statement:

The Department of State's only concern would be in case the experimental areas selected would be close to national boundaries which might create problems with the adjoining countries of Canada and Mexico. In the event of such possibilities the Department would like to ensure that provision is made for advance agreements with any affected countries before such experimentation took place.<sup>255</sup>

357. In at least one case, a State undertook to guarantee compensation for injuries that might be caused in a neighbouring State by a private company operating in its territory. Thus Canada and the United States conducted negotiations concerning a project for petroleum prospection that a private Canadian company planned to undertake in the *Beaufort Sea*, off the Mackenzie delta. The project aroused grave concern in the neighbouring territory of Alaska, in particular in respect of the safety measures envisaged and the funds available for compensating potential victims in the United States. As a result of the negotiations, the Canadian company was required to constitute a fund that would ensure payment of the required compensation. The Canadian Government, in turn, undertook to guarantee the payment of compensation.<sup>256</sup>

<sup>253</sup> *Federal Register*, vol. 41, No. 108, 3 June 1976, p. 22329.

<sup>254</sup> *Digest of United States Practice in International Law 1976* (Washington, D.C.), p. 441.

<sup>255</sup> Letter addressed by the Department of State to Senator Magnuson, Chairman of the Senate Committee on Commerce, "Weather Modification", *Hearings before the Committee on Commerce*, United States Senate, 89th Congress, 2nd session, part 2, 1966, p. 321.

<sup>256</sup> *International Canada*, Toronto, vol. 7, 1976, pp. 84-85.

## CHAPTER V

### Liability

358. Regardless of any preventive measures that States may take in undertaking activities, they may nevertheless be unable to prevent the occurrence of injuries in the territory of another State. The concept of liability

for injuries to others, in the absence of fault, is not new in domestic law. In the case of certain activities, a causal relationship between the activity and the injury is sufficient to entail liability. This concept in domestic law has

been continuously promoted for reasons of morality, social policy and maintenance of public order. In countries with more complex and developed torts law, legislators and courts have begun to recognize that, while some activities are tolerated by law, they “must pay their way”.<sup>257</sup> Furthermore, there is the question of who must bear the responsibility to compensate for damage when neither party, under the law, can be blamed. In some instances, strict liability has been imposed upon the party that has initiated the activity as the party that can best bear the loss, or for other reasons connected with social policy.<sup>258</sup>

359. In domestic law, liability for injuries caused by certain permissible activities is termed “strict” or “no-fault” liability. Strict liability has been imposed for a number of activities; some have a longer history than others. Before reviewing the application of a similar principle of liability in relations between States, it may be useful to examine briefly the application of the law of liability for permissible activities. One early application of what is called strict or no-fault liability in domestic

<sup>257</sup> A. A. Ehrenzweig, *Negligence Without Fault* (Berkeley, University of California Press, 1951).

<sup>258</sup> William Prosser, an authority on United States torts law, enumerates in his *Handbook of the Law of Torts*, 4th ed. (St. Paul, Minn., West Publishing Co., 1971), pp. 494-496, instances in which strict liability has been recognized to be relevant, as follows:

“This new policy frequently has found expression where the defendant’s activity is unusual and abnormal in the community, and the danger which it threatens to others is unduly great—and particularly where the danger will be great even though the enterprise is conducted with every possible precaution. The basis of the liability is the defendant’s intentional behaviour in exposing those in his vicinity to such a risk. The conduct which is dealt with here occupies something of a middle ground. It is conduct which does not so far depart from social standards as to fall within the traditional boundaries of negligence—usually because the advantages which it offers to the defendant and to the community outweigh even the abnormal risk; but which is still so far socially unreasonable that the defendant is not allowed to carry it on without making good any actual harm which it does to his neighbours.

“The courts have tended to lay stress upon the fact that the defendant is acting for his own purposes, and is seeking a benefit or a profit of his own from such activities, and that he is in a better position to administer the unusual risk by passing it on to the public than is the innocent victim. The problem is dealt with as one of allocating a more or less inevitable loss to be charged against a complex and dangerous civilization, and liability is imposed upon the party best able to shoulder it. The defendant is held liable merely because, as a matter of social adjustment, the conclusion is that the responsibility should be his. This modern attitude, which is largely a thing of the last four decades, is of course a far cry from the individualistic viewpoint of the common law courts.

“While such strict liability often is said to be imposed ‘without fault’, it can scarcely be said that there is less of a moral point of view involved in the rule that one who innocently causes harm, should make it good. . . .

“ . . .

“ . . . The basis of his liability in either case is the creation of an undue risk of harm to other members of the community. It has been said that there is ‘conditional fault’, meaning that the defendant is not to be regarded as at fault unless or until his conduct causes some harm to others, but he is then at fault, and to be held responsible. If this analysis helps anyone, it is certainly as permissible as another.

“Once the legal concept of ‘fault’ is divorced, as it has been, from the personal standard of moral wrongdoing, there is a sense in which liability with or without ‘fault’ must beg its own conclusion. The term requires such extensive definition, that it seems better not to make use of it at all, and to refer instead to strict liability, apart from either wrongful intent or negligence.”

law concerns owners of dangerous animals,<sup>259</sup> who were required to protect the community against the attendant risks.

360. The concept of “strict liability” for damage caused by animals was recognized in Roman law. Under the *actio de pauperis* derived from the XII Tables, an owner was required either to compensate the victim for his loss or to make surrender of the offending animal.<sup>260</sup> The civil codes (CC) of many States, including those of France, Belgium and Italy, also impose strict liability upon the owner or keeper of an animal for the damage it causes, whether the animal was in his keeping or had strayed or escaped.<sup>261</sup> The German Civil Code of 1900, as amended in 1908, provided for exceptions to strict liability only in the case of domestic animals used by the owner in his profession or in his business, or under his care.<sup>262</sup>

361. Strict liability is also recognized in respect of owners or keepers of animals in Argentina (CC, art. 1126), Brazil (CC, art. 1527), Colombia (CC, art. 2353), Greece (CC, art. 924), Hungary (CC, art. 353), Mexico (CC, art. 1930), the Netherlands (CC, art. 1404), Poland (CC, art. 431), Switzerland (CC, art. 56) and Yugoslavia.<sup>263</sup> Strict liability for damage caused by fire is not widely recognized in domestic law and the elements of fault or negligence are still essential for liability. For example, the French Civil Code, in article 1384, holds a person who possesses by whatever right all or part of a building or personal property in which a fire occurs liable *vis-à-vis* third persons for damage caused by such fire only if it is proved that it was attributable to his *fault* or to the *fault of a person for whom he is responsible*.

362. The theory of strict liability has been incorporated in the Workmen’s Compensation Acts in the United States; the employer is strictly liable for injuries to his employees. The policy behind liability for employers is one of “social insurance”, and of determining who can best carry the loss when fault is involved.<sup>264</sup> These laws, however, do not cover all activities, but in the last few years there has been strong advocacy in the United States for “strict liability” on a broader scale. The strict liability of employers is also recognized in France. Under article 1 of the 1898 law concerning liability for industrial accidents to workers (*loi concernant la responsabilité des accidents dont les ouvriers sont victimes dans leur travail*), the victim or his representatives are entitled to demand compensation from the employer if, in consequence of the accident, the person concerned is obliged to stop work for more than four days.

<sup>259</sup> Prosser, *op. cit.*, pp. 496 *et seq.*

<sup>260</sup> F. F. Stone, “Liability for damage caused by things”, in A. Tunc, ed., *International Encyclopedia of Comparative Law*, vol. XI, *Torts*, part 1 (Nijhoff, The Hague, 1983), chap. 5, p. 11, para. 39.

<sup>261</sup> *Ibid.*, p. 12, para. 42.

<sup>262</sup> Article 833 of the German Civil Code, *ibid.*, p. 13, para. 47.

<sup>263</sup> *Ibid.*, p. 14, paras. 51-52.

<sup>264</sup> The concept of workmen’s compensation derives from the duties under common law formerly incumbent upon the master for the protection of his servants. See Prosser, *op. cit.*, pp. 525 *et seq.*, see also p. 531, footnote 43.

363. Strict liability in the case of abnormally dangerous activities and objects is a comparatively new concept. The leading decision which has influenced domestic law in the United Kingdom and the United States, and which is thought to have given rise to the doctrine of strict liability, is that rendered in the United Kingdom in 1868 in the *Rylands v. Fletcher* case.<sup>265</sup> Justice Blackburn, in the Exchequer Chamber, had stated:

We think that the true rule of law is, that the person who, for his own purposes, brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it at his peril, and if he does not do so, is *prima facie* answerable for all the damage which is the natural consequence of its escape. . . .<sup>266</sup>

This broad language was later limited by the House of Lords, which stated that the principle applied only to a "non-natural" use of the defendant's lands, as distinguished from "any purpose for which it might in the ordinary course of the enjoyment of land be used".<sup>267</sup> More than one hundred subsequent decisions in the United Kingdom have followed the ruling in this case, and strict liability has been confined to things or activities that are "extraordinary", "exceptional" or "abnormal", to the exclusion of those that are "usual and normal".<sup>268</sup> This doctrine does not appear to be applicable to ordinary use of land or to such use as is proper for the benefit of the general community.<sup>269</sup> In determining what is a "non-natural use" the English courts appear to have looked not only to the *character* of the thing or activity in question, but also to the *place* and *manner* in which it is maintained and its relation to its environment.<sup>270</sup>

364. In the United States, the *Rylands v. Fletcher* precedent was followed by a large number of courts, but rejected by others, among them the courts of New York, New Hampshire and New Jersey. Since the cases before the latter courts bore on customary, natural uses "to which the English courts would certainly never have applied the rule", it was held that the *Rylands v. Fletcher* rule had been "misstated" and, as such, must be "rejected in cases in which it had no proper application in the first place".<sup>271</sup> The *American Restatement of the*

*Law of Torts*, established by the American Law Institute,<sup>272</sup> adopted the principle of the *Rylands v. Fletcher* decision, but confined its application to *ultrahazardous activities* of the defendant. Section 520 enumerates factors to be considered in determining whether an activity is abnormally dangerous:

(a) Existence of a high degree of risk of some harm to the person, land or chattels of others;

(b) Likelihood that the harm that results from it will be great;

(c) Impossibility of eliminating the risk by the exercise of reasonable care;

(d) Extent to which the activity is not one of common usage;

(e) Inappropriateness of the activity to the place where it is carried on;

(f) Extent to which its value to the community is outweighed by its dangerous attributes.

Ultrahazardous activities have been defined as those that necessarily involve a risk of serious harm to the person, land or chattels of others which cannot be eliminated by the exercise of the utmost care and is not a matter of common usage. This definition has been criticized on the grounds that it is narrower than the ruling in the *Rylands v. Fletcher* case and for its emphasis on the *nature* of the activity—"extreme danger and impossibility of eliminating it with all possible care"—rather than on its *relation to its surroundings*.<sup>273</sup> At the same time, the *Restatement* is broader than the ruling in the case, for it does not limit the concept to cases where the material "escapes" from the defendant's land.

365. The rule of strict liability for ultrahazardous activities appears to be provided for in article 1384, paragraph 1, of the French Civil Code,<sup>274</sup> which stipulates:

A person is liable not only for the damage he causes by his own act, but also for that caused by the acts of persons for whom he is responsible or by things that he has under his charge.

Under the rules laid down by this article and first confirmed by the Cour de Cassation in June 1896, it suffices that the plaintiff show that he has suffered damage from an inanimate object in the defendant's keeping for liability to be established.<sup>275</sup>

<sup>265</sup> *The Law Reports, Court of Exchequer*, vol. 1, 1866, p. 265. In regard to this case and its implications in United States law, see Prosser, *op. cit.*, and Anderson, "The Rylands v. Fletcher doctrine in America: abnormally dangerous, ultrahazardous, or absolute nuisance?", *Arizona State Law Journal*, Tempe, 1978, p. 99.

<sup>266</sup> *Ibid.*, p. 279.

<sup>267</sup> *The Law Reports, English and Irish Appeal Cases before the House of Lords*, vol. III, 1868, pp. 330, at 338.

<sup>268</sup> Prosser, *op. cit.*, p. 506, and footnotes 48, 50 and 51.

<sup>269</sup> The House of Lords halted the expansion of that doctrine in a case in which the plaintiff, a government inspector, had been injured by an explosion in the defendant's munitions plant. The judges in this case limited the principle of strict liability to cases in which there had been an *escape* of a dangerous substance from land under the control of the defendant, and two other judges held that the principle was not applicable to *personal injury*. This decision was a sudden departure from the holdings of the leading case; however, it is uncertain whether it has changed the trend towards the application of the principle of strict liability established by the decision in the *Rylands v. Fletcher* case (see Prosser, *op. cit.*, p. 506, footnote 52).

<sup>270</sup> W. T. S. Stallibrass, "Dangerous things and the non-natural use of land", *The Cambridge Law Journal*, London, vol. III, 1929, p. 387. See also The Law Commission, *Civil Liability for Dangerous Things and Activities* (London, 1970).

<sup>271</sup> Prosser, *Selected Topics on the Law of Torts* (Ann Arbor, University of Michigan Law School, 1954), pp. 149-152.

<sup>272</sup> See American Law Institute, *American Restatement of the Law of Torts* (Washington, D.C., 1938), vol. III, chap. 21, sects. 519-524.

<sup>273</sup> See Prosser, *Selected Topics*, . . . , p. 158.

<sup>274</sup> See H. and L. Mazeaud, *Traité théorique et pratique de la responsabilité civile délictuelle et contractuelle*, vol. II, 5th ed. established by A. Tunc (Paris, Montchrestien, 1958), p. 342; A. von Mehren and J. R. Gordley, *The Civil Law System*, 2nd ed. (Boston, Little, 1977), p. 555; F. H. Lawson, *Negligence in the Civil Law* (Oxford, Clarendon Press, 1950), pp. 46-50; R. Rodière, "Responsabilité civile et risque atomique", *Revue internationale de droit comparé*, Paris, 11th year, 1959, p. 505; B. Starek, "The foundation of delictual liability in contemporary French law: An evaluation and a proposal", *Tulane Law Review*, New Orleans, La., vol. 48, 1973-1974, pp. 1044-1049.

<sup>275</sup> See also *Jand'heur v. Galeries belfortaises* (1930) (Daloz, *Recueil périodique et critique*, 1930 (Paris), part 1, p. 57). The decision in this case also established a presumption of fault on the part of the person having in his charge the inanimate object that has caused the injury.

... A literal interpretation of the article [1384] undoubtedly gives a result comparable to—or rather more far-reaching than—that in *Rylands v. Fletcher*, for there is nothing in the words of the article to restrict liability to cases where defendant can be proved to have been negligent in the custody of the things, or even to things which are inherently dangerous. . . .<sup>276</sup>

366. The concept of strict liability also appears in the legal system of the Soviet Union. The 1922 Civil Code of the Russian Socialist Federal Soviet Republic (RSFSR) contained a chapter entitled "Obligations arising from injury caused to another" (arts. 403-415), which correspond to the concepts of torts and delictual liability in the Roman law and common law systems.<sup>277</sup> According to those provisions, "causation" alone suffices to establish liability, the requirement of "fault" being often a cause of injustice. Article 404 provided as follows:

Individuals and enterprises whose activities involve increased hazard for persons coming into contact with them, such as railways, tramways, industrial establishments, dealers in inflammable materials, keepers of wild animals, persons erecting buildings and other structures, and the like, shall be liable for the injury caused by the source of increased hazard, if they do not prove that the injury was the result of *force majeure* or occurred through the intent or gross negligence of the person injured.

367. Once the Roman law maxim *cuius commodum eius periculum* had been rejected, this article was justified largely in terms of social policy, including the need to promote safety measures and to remedy the hardship that a plaintiff would suffer if the enterprise could escape responsibility merely by showing that all reasonable care had been taken.<sup>278</sup> In 1964, this article was replaced by article 454, based on article 90 of the Fundamental Principles of 1961. Article 454 reads:

*Liability for harm caused by a source of increased danger.* Organizations and citizens whose activity involves increased danger for those in the vicinity (transport organizations, industrial enterprises, building projects, possessors of motor cars, etc.) must make good the harm caused by the source of increased danger unless they prove that the harm arose in consequence of irresistible force or as a result of the intention of the victim.

368. Recognition of the principle of strict liability is also embodied in the 1964 Polish Civil Code, articles 435 to 437 of which recognize strict liability for damage caused by ultrahazardous activities. The Civil Code of the German Democratic Republic, adopted in 1975, incorporates strict liability in article 344, under which enterprises whose activities lead to increased danger to others are strictly liable for damage resulting from those activities. The same applies to damage resulting from the operation of enterprises as well as the location of things and substances with regard to which increased danger for the life, health and property of others cannot altogether be excluded.<sup>279</sup>

<sup>276</sup> Lawson, *op. cit.*, p. 44.

<sup>277</sup> See V. Gsovski, *Soviet Civil Law* (Ann Arbor, University of Michigan Law School, 1948), vol. 1, p. 489; V. Gsovski and K. Grzybowski, eds., *Government, Law and Courts in the Soviet Union and Eastern Europe* (London, Stevens, 1959), vol. 2, p. 1175.

<sup>278</sup> See M. J. L. Hardy, "Nuclear liability: The general principles of law and further proposals", *The British Year Book of International Law*, 1960 (London), vol. 36, p. 235; and A. Erh-Soon Tay, "Principles of liability and the 'source of increased danger' in the Soviet law of tort", *The International and Comparative Law Quarterly* (London), vol. 18, 1969, pp. 424-425.

<sup>279</sup> See also articles 345 and 347 of the 1975 Civil Code of the German Democratic Republic.

369. Article 178 of the Egyptian Civil Code, article 231 of the Iraqi Civil Code, article 291 of the Jordanian Civil Code and article 161 of the Sudanese Civil Code all establish the strict liability of persons in charge of machines or other objects requiring special care. Article 133 of the Algerian Civil Code goes even farther and recognizes the strict liability of a person in charge of any object when that object causes damage. The Austrian Civil Code (article 1318) and the 1928 Mexican Civil Code (articles 1913 and 1932) also recognize strict liability in respect of dangerous activities or things.

370. The principle of strict liability has been applied in regard to defective products. The policies underlying this practice were stated in the *Escola v. Coca Cola Bottling Co.* case (1944):

... Those who suffer injury from defective products are unprepared to meet its consequences. The cost of an injury and the loss of time or health may be an overwhelming misfortune to the person injured, and a needless one, for the risk of injury can be insured by the manufacturer and distributed among the public as a cost of doing business. It is to the public interest to discourage the marketing of products having defects that are a menace to the public. If such products nevertheless find their way into the market it is to the public interest to place the responsibility for whatever injury they may cause upon the manufacturer, who, even if he is not negligent in the manufacture of the product, is responsible for its reaching the market. However intermittently such injuries may occur and however haphazardly they may strike, the risk of their occurrence is a constant risk and a general one. Against such a risk there should be general and constant protection and the manufacturer is best situated to afford such protection.<sup>280</sup>

This has become the official doctrine in some of the States of the United States. In others, for example New York, it has been supported by additional reasons that were not applicable in the aforementioned case. In its modified form, strict liability in respect of defective products is based on the theory that the manufacturer was in breach of an *implied warranty* to the plaintiff that the article had been properly made.<sup>281</sup> However, a leading United States specialist on the law of torts has strongly objected to this concept of "warranty" as a device that "carries far too much luggage in the way of undesirable complications, and is more trouble than it is worth".<sup>282</sup>

371. In a number of European countries, "strict liability" has not been fully applicable in cases of injury caused by the consumption or use of manufactured products. In the Federal Republic of Germany, for example, the liability of the manufacturer generally requires proof of fault, the concept of strict liability being ruled out. In cases where the injured consumer and the manufacturer are related by contract, the basis for a legal action is the bad performance of the contract and, in this case, the fault of the manufacturer is usually presumed (CC art. 282). Where the parties are not related by contract, action can be based only on the notion of violation of a duty of security to the public

<sup>280</sup> *California Reports 2d Series*, vol. 24, p. 453, at p. 462.

<sup>281</sup> *Goldberg v. Kollsman Instrument Corp.* (1963), *New York Supplement 2d Series*, vol. 240, p. 592.

<sup>282</sup> Prosser, *The Law of Torts*, (*op. cit.*, footnote 258 above), p. 656. See also R. M. Sachs, "Negligence or strict product liability: is there really a difference in law or economics?", *Georgia Journal of International and Comparative Law*, Athens, vol. 8, 1978, p. 259; and D. J. Gingerich, "The interagency task force 'blueprint' for reforming product liability tort law in the United States", *ibid.*, p. 279.

(CC art. 831), or on that of the liability of the master for damage done by his servant. Some exceptions to this rule are provided for (*ibid.*), but in general the consumer sues only his fellow contracting party, who is usually not the manufacturer.<sup>283</sup>

372. Similarly, the draft civil code of the Netherlands provides that a person who unknowingly manufactures defective products which constitute a danger to persons or things is liable, if that danger materializes, in the same way as if the defect had been known to him, unless he can prove that the injury was due neither to his own fault or to that of another who, upon his orders, had engaged in the manufacture of the product, nor to the failure of the appliances used by him. However, some Netherlands jurists wish to render the manufacturer responsible for unexplained defects or failures in a product, that is, to hold the manufacturer strictly liable for damage caused by his products.<sup>284</sup> In the Soviet Union, the domestic law does not contain provisions relating to the strict liability of the manufacturer of defective products. However, article 454 of the Civil Code of the RSFSR expressed the principle that a person was strictly liable if he caused injury by exceptionally hazardous means. Whether this provision was applicable to manufacturers as opposed to "owners" is unclear.<sup>285</sup>

373. In the United States of America, the principle of strict liability was also apparent in the Aeronautics Act of 1922.<sup>286</sup> That legislation, adopted in whole or in part by twenty-four States of the Union, provides for the "absolute liability" of the owners of aircraft for injuries to persons or property on land or water caused by the ascent, descent or flight of the aircraft or the dropping or falling of any object therefrom, unless the injury was caused in whole or in part by the negligence of the person injured, or of the owner or bailee of the property damaged. The object of the Act was to place the liability for damage caused by accidents of aircraft upon operators, and to protect innocent victims, even though the accident might not be attributable to the fault of the operator.<sup>287</sup>

374. A number of Latin American and European countries have also adopted the principle of strict liability, often similar to the 1933 and 1952 Rome Conventions for accidents involving aircraft. Argentina, Guatemala, Honduras and Mexico are among the Latin American countries which have imposed strict liability based on the concept of risk, and among European

countries having done the same are Italy, Spain, Denmark, Sweden, Norway, Finland, Switzerland, France and the Federal Republic of Germany.<sup>288</sup>

375. The rule of strict liability has also been applied in respect of owners and operators of sources of power for damage caused by the production or storage of electricity. In this area, the concept of strict liability corresponds to the notion that "electricity is a thing in one's keeping" (France, CC art. 1384), or to the notion that "the owner is presumed to be at fault" (Argentina, CC art. 1135), or to the notions of "dangerous things" (United States and United Kingdom), or of "dangerous activities" (Italy, CC art. 2050).<sup>289</sup>

376. Originally, nuisance meant nothing more than harm or annoyance.<sup>290</sup> The principle of strict liability has been applied to cases of absolute nuisance, without regard to the defendant's intent or precautions. There has been little discussion of nuisance in the context of liability. The reasons for this have been described as follows:

... One reason is that nuisance suits frequently have been in equity, seeking an injunction, so that the question is not so much one of the nature of the defendant's conduct as of whether he shall be permitted to continue it. Even where the action is one for damages, it usually has been brought after long continuance of the conduct and repeated requests to stop it; and whatever may have been his state of mind in the first instance, the defendant's persistence after notice of the harm he is doing takes on the aspects of an intentional tort. Another reason is that in nuisance cases the threat of future harm may in itself amount to a present interference with the public right or the use and enjoyment of land, so that the possible bases of liability tend to merge and become more or less indistinguishable. Nevertheless it is quite clear that a substantial part of the law of nuisance rests upon neither wrongful intent nor negligence.<sup>291</sup>

377. It has been claimed that the concept of absolute nuisance is closely related to the rule in *Rylands v. Fletcher*. To distinguish that rule, some have claimed that it applies to conduct which is not wrongful in itself, and so will not be prohibited or enjoined in advance, but will make the defendant strictly liable if it causes actual damage; whereas a nuisance is in itself wrongful, and may always be enjoined. Others have rejected this distinction on the grounds that there are no cases or decisions to sustain it.<sup>292</sup> It has also been stated that the concept of absolute nuisance and the *Rylands* rule are related to one another as intersecting circles; they have a large area in common, but nuisance is the *older tort* and its historical development has limited it to two kinds of interference; with the public interest and with the enjoyment of land, excluding such other damage as personal injuries not connected with either. Thus the underlying principles appear to be the same in each case and they are indistinguishable except by the accident of their history.<sup>293</sup>

378. Many legal systems have shown a persistent tendency to recognize the concept of strict liability while

<sup>283</sup> See Stone, *loc. cit.* (footnote 260 above), p. 74, paras. 265-266.

<sup>284</sup> *Ibid.*, pp. 73-74, para. 264. See also Italian practice, *ibid.*, p. 74, para. 268.

<sup>285</sup> See F. A. Orban, "Product liability: a comparative legal restatement—foreign national law and EEC directive", *Georgia Journal of International and Comparative Law*, vol. 8, 1978, pp. 371-373.

<sup>286</sup> United States of America, *Uniform Laws Annotated*, vol. II, pp. 159-171. This act was withdrawn in 1938 by the National Conference of Commissioners on Uniform State Laws and replaced by other texts drafted by that body, imposing substantially the same limited absolute liability. See *Handbook of National Conference of Commissioners on Uniform State Laws*, 1938, p. 318, and Uniform Aviation Liability Act, art. II, paras. 201-202.

<sup>287</sup> See E. C. Sweeney, "Is special aviation liability legislation essential?", *The Journal of Air Law and Commerce*, Chicago, Ill., vol. 19, p. 166; *Prentiss et al. v. National Airlines, Inc.*, 112 *Federal Supplement*, pp. 306 and 312.

<sup>288</sup> See Stone, *loc. cit.* (footnote 360 above), pp. 45-46, paras. 178-181.

<sup>289</sup> *Ibid.*, pp. 48-49, paras. 193-197.

<sup>290</sup> Prosser, *Selected Topics* . . . (see footnote 271 above), p. 164.

<sup>291</sup> *Ibid.*, p. 166. See also P. H. Winfield, "The myth of absolute liability", *The Law Quarterly Review*, London, vol. 42, 1926, p. 37.

<sup>292</sup> Prosser, *Selected Topics* . . . , p. 172.

<sup>293</sup> *Ibid.*, p. 177. See also Winfield, "Nuisance as a tort", *The Cambridge Law Journal*, London, vol. IV, 1932, p. 195.



maintaining liability dependent on “fault” as the general principle. Originally, strict liability was recognized in legal systems in connection with keeping animals or causing fire and was based on reasons of morality.

379. As legal systems developed, the concept of strict liability appears to have been introduced as a means *to accommodate diverse social interests*. The reason for the application of this concept to relations between employers and employees under certain conditions (ultrahazardous activities, product liability, air transport, etc.) has often been *social necessity* rather than morality.

380. Strict liability as a legal concept now appears to have been accepted by most legal systems, especially those of technologically developed countries with more complex torts laws. The extent of activities subject to strict liability may differ; in some countries it is more limited than in others. The legal basis for strict liability also varies from “presumed fault” to the notion of “risk”, “dangerous activity involved”, etc. But it is evident that strict liability is a principle common to a sizable number of countries with different legal systems, which have had to regulate activities to which this principle is relevant. While States may differ as to the particular application of this principle, their understanding and formulation of it are substantially similar.

381. From an examination of municipal laws, the following characteristics of strict liability emerge:

(1) The concept of strict liability has been stipulated in the civil code or in general terms in the decisions of domestic courts, as opposed to special legislation. This demonstrates the importance of strict liability as a general legal principle and its acceptance by many States with diverse legal systems.

(2) In municipal law, the definition of strict liability is characterized by its lack of reference to fault; “fault” is not a criterion of liability.

(3) It has been recognized by municipal law that it would be inequitable and unduly harsh to the public if operators of hazardous activities were permitted to avoid liability for damage caused by their industry under the rules of “fault liability”.

(4) Municipal law limits strict liability to “the kind of harm, the risk of which makes the activity abnormally dangerous”.<sup>294</sup> The RSFSR Supreme Court held that a railroad was not liable, under section 404 of the Civil Code, for the injury sustained by a passenger “who was the victim of a hold-up on the train, because such injury was not caused by the increased hazard incidental to railways as a special kind of transportation”.<sup>295</sup> There must be a causal nexus between the activity and the harm from which relief is sought and, even if causation is admitted, liability may be avoided under certain conditions:<sup>296</sup>

(a) When the victim assumes the risk of harm;<sup>297</sup>

(b) When the victim intentionally suffers the damage;<sup>298</sup> however, the contributory negligence of the plaintiff does not exempt the person who carries on an abnormally dangerous activity from strict liability;<sup>299</sup>

(c) When the damage is caused by an irresistible force or in a case of *force majeure*.<sup>300</sup>

382. The introduction and application of the concept of liability in inter-State relations, on the other hand, is relatively newer and less developed than in domestic law. One reason for this late start may have been the fact that States were not so involved in activities which could injure other States and their nationals. The difficulties in accommodating the concept of liability with other well-established concepts of international law, such as domestic jurisdiction and territorial sovereignty, should not be ignored. Of course, the development of no-fault liability in domestic law has faced similar difficulties. But social necessity, in many States, has led to accommodating this new legal concept with others in a way which serves social policies and public order. In inter-State relations, activities which may cause injuries to others, beyond the territorial jurisdiction or control of the acting State, have in most cases been singled out, and the liability issue has been subject to agreements between States. This may be more akin to laws on liability, such as those relating to the liability of keepers or owners of animals, product liability, employers’ liability, etc. But in State practice there are nevertheless a few references to a broader concept of liability, such as the principle of due care, good neighbourliness, etc.

383. It is not suggested here that the development of the liability concept in State practice has the same content and procedure as in domestic law. The domestic law references are mentioned only to provide guidelines when appropriate for understanding the concept of liability and its development.

#### (a) *Multilateral agreements*

384. Sometimes the main purpose of a multilateral agreement is to resolve the question of liability and compensation which may be involved in certain activities without limiting or hindering the activities themselves. It seems to have been accepted in principle that such activities should be authorized regardless of the injuries they may cause. Agreements have been concluded only to deal with liability, compensation and jurisdictional questions which may arise from an accident, as in the 1976 Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Seabed Mineral Resources. The preamble to the Convention reads:

<sup>297</sup> American Law Institute, *Restatement (Second) of Torts*, sect. 523 (Tentative Draft No. 10, 1964).

<sup>298</sup> *Ibid.*, sect. 524, 2; RSFSR, CC art. 454 (see Tay, *loc. cit.* (footnote 278 above), p. 441).

<sup>299</sup> American Law Institute, *Restatement (Second) of Torts*, sect. 545, 1 (Tentative Draft No. 10, 1964).

<sup>300</sup> *Idem*; RSFSR, CC art. 454 (see Tay, *loc. cit.*, pp. 441-442); France, CC art. 1384, and *Jand’heur v. Galeries belfortaises* case (1930) (see footnote 275 above).

<sup>294</sup> American Law Institute, *Restatement (Second) of Torts*, art. 519, 2 (Tentative Draft No. 10, 1964).

<sup>295</sup> Gsovski, *op. cit.* (footnote 277 above), p. 506.

<sup>296</sup> See J. M. Kelsen, “State responsibility and the abnormally dangerous activity”, *Harvard International Law Journal*, Cambridge, Mass., vol. 13, 1972, pp. 230-231.

The States Parties to this Convention,

Conscious of the dangers of oil pollution posed by the exploration for, and exploitation of, certain seabed mineral resources,

Convinced of the need to ensure that adequate compensation is available to persons who suffer damage caused by such pollution,

Desiring to adopt uniform rules and procedures for determining questions of liability and providing adequate compensation in such cases,

...

385. Some other conventions refer to the concept of liability but do not resolve the questions of compensation and jurisdiction. For example, the 1978 Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution provides that the contracting States shall co-operate in formulating rules and procedures for civil liability and compensation for damage resulting from pollution of the marine environment, but it does not stipulate those rules and procedures. Article XIII of the Convention reads:

*Article XIII. Liability and compensation*

The Contracting States undertake to co-operate in the formulation and adoption of appropriate rules and procedures for the determination of:

(a) civil liability and compensation for damage resulting from pollution of the marine environment, bearing in mind applicable international rules and procedures relating to those matters; and

(b) liability and compensation for damage resulting from violation of obligations under the present Convention and its protocols.

386. Similar requirements are stipulated in the 1976 Convention for the Protection of the Mediterranean Sea against Pollution and in the 1974 Convention on the Protection of the Marine Environment of the Baltic Sea Area. Article 12 of the Convention for the Protection of the Mediterranean Sea reads:

*Article 12. Liability and compensation*

The Contracting Parties undertake to co-operate as soon as possible in the formulation and adoption of appropriate procedures for the determination of liability and compensation for damage resulting from the pollution of the marine environment deriving from violations of the provisions of this Convention and applicable protocols.

Article 17 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area reads:

*Article 17. Responsibility for damage*

The Contracting Parties undertake, as soon as possible, jointly to develop and accept rules concerning responsibility for damage resulting from acts or omissions in contravention of the present Convention, including, *inter alia*, limits of responsibility, criteria and procedures for the determination of liability and available remedies.

387. Article X of the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter recommends that the contracting States develop rules and procedures on liability, but is based on a different assumption, namely, the existence of principles of international law on State responsibility for damage to the environment of other States or to any other area of the environment. Thus article X stipulates that procedures for the assessment of liability and settlement of disputes should be formulated in accordance with those principles of international law:

*Article X*

In accordance with the principles of international law regarding State responsibility for damage to the environment of other States or to any other area of the environment, caused by dumping of wastes

and other matter of all kinds, the Contracting Parties undertake to develop procedures for the assessment of liability and the settlement of disputes regarding dumping.

388. Article 235 of the 1982 United Nations Convention on the Law of the Sea uses a different and a more complex language. It provides that States shall co-operate to "*implement*" the existing international law and its future development relating to responsibility and liability for assessment of compensation for damage and the settlement of disputes:

*Article 235. Responsibility and liability*

1. States are responsible for the fulfilment of their international obligations concerning the protection and preservation of the marine environment. They shall be liable in accordance with international law.

2. States shall ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction.

3. With the objective of assuring prompt and adequate compensation in respect of all damage caused by pollution of the marine environment, States shall co-operate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and compensation for damage and the settlement of related disputes, as well as, where appropriate, development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds.

This article assumes the existence of principles of international law governing issues of liability.

389. In other conventions, finally, the contracting parties are merely requested to co-operate and to develop rules on liability and compensation in conformity with international law. For example, article 14 of the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region reads:

*Article 14. Liability and compensation*

The Contracting Parties shall co-operate with a view to adopting appropriate rules and procedures, which are in conformity with international law, in the field of liability and compensation for damage resulting from pollution of the Convention area.

*(b) Bilateral agreements*

390. Few bilateral agreements are designed to resolve the question of liability for extraterritorial injuries. Some make no reference to anything bearing on liability; others make general references that may be interpreted to mean that other questions, including that of liability, will be dealt with under a different formula. The 1983 Agreement between the United States of America and Mexico,<sup>101</sup> for example, states in article 17 that the Agreement does not affect the rights and obligations of the parties under international agreements to which they are party or existing or future agreements between the parties themselves:

*Article 17*

Nothing in this Agreement shall be construed to prejudice other existing or future agreements concluded between the two Parties, or affect the rights and obligations of the Parties under international agreements to which they are a party.

391. In some agreements it is expressly stated that the question of liability is not examined. For example, the

<sup>101</sup> See footnote 16 above.

1975 Agreement between Canada and the United States of America relating to weather modification activities<sup>302</sup> excludes the resolution of liability questions. After the formulation of certain procedures regarding weather modification activities affecting the contracting States, it is provided, in article VII, that the Agreement *should not be construed as affecting the liability and responsibility issues arising between two countries, nor as implying the existence of any generally applicable rule of international law*:

Article VII

Nothing herein relates to or shall be construed to affect the question of responsibility or liability for weather modification activities, or to imply the existence of any generally applicable rule of international law.

This article neither confirms nor denies the existence of any principles of liability accepted by the two States. Nevertheless, the Agreement recognizes that such a question may be relevant and may be raised in connection with weather modification activities.

392. In the 1974 Agreement between the United States and Canada regarding certain rocket launches,<sup>303</sup> the two Governments agree, in the event of loss or damage resulting from those launches, to consult each other promptly, prior to the settlement of any claim, in order to expedite such *claims in accordance with international law and the domestic law of each State*. The relevant paragraph of the Agreement (note I, third para.) reads:

The Embassy [of the United States] has the honour to propose that, in the event of such loss or damage, the Government of the United States and the Government of Canada shall consult promptly, and in any case prior to the settlement of any claim arising out of these launches, with a view to arriving at an expeditious and mutually acceptable disposition of such claim, in accordance with international law and the domestic law of each state. . . .

393. The 1909 Treaty relating to the boundary waters between Canada and the United States of America<sup>304</sup> contains a different language on liability. Article II refers to *legal remedies* available to parties suffering injuries caused by activities occurring in the boundary waters under the territorial control of the other State. In such cases, under article II, the *injured parties are entitled to the local legal remedies available in the country where the activities occurred*:

Article II

Each of the High Contracting Parties reserves to itself or to the several State Governments on the one side and the Dominion or Provincial Governments on the other, as the case may be, subject to any treaty provisions now existing with respect thereto, the exclusive jurisdiction and control over the use and diversion, whether temporary or permanent, of all waters on its own side of the line which in their natural channels would flow across the boundary or into boundary waters; but it is agreed that *any interference with or diversion from their natural channel of such waters on either side of the boundary, resulting in any injury on the other side of the boundary, shall give rise to the same rights and entitle the injured parties to the same legal remedies as if such injury took place in the country where such diversion or interference occurs*;<sup>\*</sup> but this provision shall not apply to cases already existing or to cases expressly covered by special agreement between the parties hereto.

It is understood, however, that neither of the High Contracting Parties intends by the foregoing provision to surrender any right which it may have to object to any interference with or diversions of waters on the other side of the boundary the effect of which would be productive of material injury to the navigation interests on its own side of the boundary.

Hence the applicable rules on liability are either the domestic law of Canada or that of the United States.

394. The 1922 Treaty between Germany and Denmark<sup>305</sup> provides remedies for individuals who have suffered injuries. Article 26 states that any person who suffers damage as a result of a new water regulation or alteration has the *right to claim full compensation* from the *person who benefited* from those regulations. The article does not refer to any particular principles of domestic or international law on liability; it states only that the matter shall be decided by the Frontier Water Commission. The relevant paragraph of article 26 reads:

Article 26. *Compensation for damage caused by regularization*

Any person who suffers loss or damage in consequence of the regularization or of the alteration in the condition of the watercourse occasioned by such regularization has the right to claim full compensation from the person who benefits by the work in question. The matter shall be decided by the Frontier Water Commission.

(c) *Judicial decisions and State practice other than agreements*

395. The concept of liability for damage caused by an activity beyond the territorial jurisdiction or control of the acting State appears to have been developed through State practice to a limited extent for some potentially harmful activities. Some sources refer to the concept in general terms, leaving its content and procedure for implementation to future developments. Other sources deal with the concept of liability only in a specific case.

396. In the past, liability has been considered as an outgrowth of failure to exercise "due care" or "due diligence". In determining whether there has been a failure to exercise due diligence, the test has been the balancing of interests. This criterion is similar to that used in determining harm and the permissibility of harmful activities, given the assessment of their impact. Liability for failure to exercise due care was established as early as 1872, in the *Alabama* case. In that dispute between the United States and the United Kingdom over the alleged failure of the United Kingdom to fulfil its duty of neutrality during the American Civil War, both sides attempted to articulate what "due diligence" entailed. The United States argued that due diligence was proportioned to the *magnitude* of the subject and to the *dignity and strength* of the power which was to exercise it:

*Due diligence*

The rules of the treaty, [the] said Case of the United States, imposed upon neutrals the obligation to use *due diligence* to prevent certain acts. These words were not regarded by the United States as changing in any respect the obligations imposed by international law. "The United States", said the Case, "understands that the diligence which is called for by the rules of the treaty of Washington is a *due diligence*—that is, a diligence proportioned to the magnitude of the subject and to the dignity and strength of the power which is to exercise

<sup>302</sup> See footnote 15 above.

<sup>303</sup> See footnote 84 above.

<sup>304</sup> See footnote 35 above.

<sup>305</sup> See footnote 59 above.

cise it; a diligence which shall, by the use of active vigilance, and of all the other means in the power of the neutral, through all stages of the transaction, prevent its soil from being violated; a diligence that shall in like manner deter designing men from committing acts of war upon the soil of the neutral against its will, and thus possibly dragging it into a war which it would avoid; a diligence which prompts the neutral to the most energetic measures to discover any purpose of doing the acts forbidden by its good faith as a neutral, and imposes upon it the obligation, when it receives the knowledge of an intention to commit such acts, to use all the means in its power to prevent it. No diligence short of this would be "due", that is, *commensurate with the emergency or with the magnitude of the results of negligence*\*. . . .<sup>306</sup>

[\* Treaty of Washington of 8 May 1871 whereby the United Kingdom and the United States of America agreed to submit their dispute to arbitration.]

397. By contrast, the British Government argued that, in order to show lack of due diligence and invoke the liability of a State, it must be proved that there had been a failure to use, for the prevention of a harmful act, such care as Governments *ordinarily* employed in their domestic concerns:

. . . it was necessary to show that there had been "a failure to use, for the prevention of an act which the government was bound to endeavour to prevent, such care as governments ordinarily employ in their domestic concerns, and may reasonably be expected to exert in matters of international interest and obligation".<sup>307</sup>

The tribunal referred to "due diligence" as a duty arising "in exact proportion to the risks to which either of the belligerents may be exposed, from a failure to fulfil the obligations of neutrality on their part".<sup>308</sup> Thus, due diligence is a function of the circumstances of the activity.

398. Later State practice *appears* not to have dealt so much with State liability arising out of failure to exercise due care, except in the area of the protection of aliens. These categories of claims include nationalization and confiscation of foreign properties, police protection and safety of foreigners, etc., which have been excluded from this study.

399. In the claim against the USSR for damage caused by the crash of the Soviet satellite *Cosmos 954* on Canadian territory in January 1978, Canada referred to the general principle of the law of "absolute liability" for injury resulting from activities with a high degree of risk:

The standard of *absolute liability for space activities*,\* in particular activities involving the *use of nuclear energy*\* is considered to have become a general principle of international law.\* A large number of States, including Canada and the Union of Soviet Socialist Republics, have adhered to this principle as contained in the 1972 *Convention on International Liability for Damage caused by Space Objects*.\* The principle of absolute liability applies to fields of activities having in common a high degree of risk. It is repeated in numerous international agreements and is one of "the general principles of law recognized by civilized nations"\* (Article 38 of the Statute of the International Court of Justice). Accordingly, this principle has been accepted as a general principle of international law.\*<sup>309</sup>

400. Similarly, in the *Trail Smelter* case, the permanent régime called for compensation for injury to United States interests arising from fume emissions *even*

*if the smelting activities conformed fully to the permanent régime as defined in the decision*:

The Tribunal is of opinion that the prescribed régime will probably remove the causes of the present controversy and, as said before, will probably result in preventing any damage of a material nature occurring in the State of Washington in the future.

But since the desirable and expected result of the régime or measure of control hereby required to be adopted and maintained by the Smelter may not occur, and since in its answer to Question No. 2, the Tribunal has required the Smelter to refrain from causing damage in the State of Washington in the future, as set forth therein, the Tribunal answers Question No. 4 and decides that on account of decisions rendered by the Tribunal in its answers to Question No. 2 and Question No. 3 there shall be paid as follows: (a) if any damage as defined under Question No. 2 shall have occurred since October 1, 1940, or shall occur in the future, whether through failure on the part of the Smelter to comply with the regulations herein prescribed or notwithstanding the maintenance of the régime, an indemnity shall be paid for such damage but only when and if the two Governments shall make arrangements for the disposition of claims for indemnity under the provisions of article XI of the Convention;[\*] (b) if as a consequence of the decision of the Tribunal in its answers to Question No. 2 and Question No. 3, the United States shall find it necessary to maintain in the future an agent or agents in the area in order to ascertain whether damage shall have occurred in spite of the régime prescribed herein, the reasonable cost of such investigations not in excess of \$7,500 in any one year shall be paid to the United States as a compensation, but only if and when the two Governments determine under article XI of the Convention that damage has occurred in the year in question, due to the operation of the Smelter, and "disposition of claims for indemnity for damage" has been made by the two Governments; but in no case shall the aforesaid compensation be payable in excess of the indemnity for damage; and further it is understood that such payment is hereby directed by the Tribunal only as a compensation to be paid on account of the answers of the Tribunal to Question No. 2 and Question No. 3 (as provided for in Question No. 4) and *not* as any part of indemnity for the damage to be ascertained and to be determined upon by the two Governments under article XI of the Convention.<sup>310</sup>

[\* Convention of 15 April 1935 between the United States of America and Canada for the Final Settlement of the Difficulties arising through Complaints of Damage done in the State of Washington by Fumes discharged from the Smelter of the Consolidated Mining and Smelting Company, Trail, British Columbia.]

401. The standard for imposing liability on the State under whose control an injurious condition exists is even more obfuscated in the decision of 9 April 1949 in the *Corfu Channel* case (*merits*). There the International Court of Justice found that Albania had known or should have known of the mines lying within its territorial waters in sufficient time to give warning to other States and their nationals. The Court found that:

In fact, *nothing* was attempted by the Albanian authorities to prevent the disaster. These grave omissions involve the *international responsibility*\* of Albania.

The Court therefore reaches the conclusion that Albania is responsible under international law for the explosions which occurred on October 22nd, 1946, in Albanian waters, and for the damage and loss of human life which resulted from them, and that there is a duty upon Albania to pay compensation to the United Kingdom.<sup>311</sup>

Owing to the difficult and circumstantial nature of the proof of Albania's knowledge of the injurious condition, it is unclear whether liability was based on a breach of the duty of due care in warning other international actors or on a standard of "strict liability" without regard to the concept of due care.

<sup>306</sup> J. B. Moore, *International Arbitrations to which the United States has been a Party* (Washington, D.C., 1898), vol. I, pp. 572-573.

<sup>307</sup> *Ibid.*, p. 610.

<sup>308</sup> *Ibid.*, p. 654.

<sup>309</sup> See *International Legal Materials* (Washington, D.C.), vol. 18, p. 907, para. 22.

<sup>310</sup> United Nations, *Reports of International Arbitral Awards*, vol. III, pp. 1980-1981.

<sup>311</sup> *I.C.J. Reports 1949*, p. 23.

402. In the same judgment, the International Court of Justice made some general statements regarding State liability which are of considerable importance. In one passage, the Court stated that it was “every State’s *obligation*\* not to allow knowingly its territory to be used for acts contrary to the rights of other States”.<sup>112</sup> It should be noted that in this passage the Court was making a *general statement of law and policy*, not limited or narrowed to any specific case. When the Court renders a decision in a case in accordance with Article 38 of its Statute, it may also declare general statements of law. The aforementioned passages are among such statements. It may therefore be concluded that, while the Court’s decision addressed the point debated by the parties in connection with the *Corfu Channel*, it also stressed a more general issue. It was a declaratory general statement regarding the conduct of any State which might cause extraterritorial injuries.

403. In the *Lake Lanoux* case, on the other hand, the tribunal, responding to the allegation of Spain that the French projects would entail an *abnormal risk* to Spanish interests, stated that only *failure* to take all necessary safety precautions would have entailed France’s responsibility if Spanish rights had in fact been infringed. The tribunal stated:

... The question was lightly touched upon in the Spanish counter memorial, which underlined the “extraordinary complexity” of procedures for control, their “very onerous” character, and the “risk of damage or of negligence in the handling of the watergates, and of obstruction in the tunnel”. But it has never been alleged that the works envisaged present any other character or would entail any other risks than other works of the same kind which today are found all over the world. It has not been clearly affirmed that the proposed works would entail an abnormal risk in neighbourly relations or in the utilization of the waters. As we have seen above, the technical guarantees for the restitution of the waters are as satisfactory as possible. If, despite the precautions that have been taken, the restitution of the waters were to suffer from an accident, such an accident would be only occasional and, according to the two Parties, would not constitute a violation of article 9.<sup>113</sup>

404. In other words, responsibility would not arise as long as all possible precautions against the occurrence of the injurious event had been taken. Although the authority of the tribunal was limited by the parties to the examination of compatibility of French activities on the Carol River with a treaty, the tribunal also touched upon the question of dangerous activities. In the passage quoted above, the tribunal stated: “It has not been clearly affirmed that the proposed works [by France] would entail an abnormal risk in neighbourly relations or in the utilization of the waters.” This passage may be interpreted as meaning that the tribunal was of the opinion that *abnormally dangerous activities constituted a special problem*, and that, if Spain had established that the proposed French project would entail an abnormal risk of injury to Spain, the decision of the tribunal might have been different.

#### A. Balancing of interests

405. State practice shows that the concept of balance of interests is also involved in questions of liability and

compensation. The role of balance of interests in the determination of liability and compensation is sometimes the same as in the assessment of activities. However, in some agreements a clear distinction has been made between the two roles. Terms such as “equitable compensation”, “fair compensation”, “limited liability”, etc., as used in State practice, clearly refer to the balancing of interests in determining liability and compensation.

406. It is obvious that the concept of balance of interests may vary according to circumstances. Negotiations concerning liability and compensation must not obstruct the undertaking and future development of commercial, industrial and technological activities which have become indispensable to and inseparable from human society. The concept of “limited liability”, for example, has been developed to balance interests in connection with such activities. In the case of certain other activities, considerations of balance of interests and priorities may be different; the interests of injured parties, for example, may prevail over the continuation of certain potentially harmful activities.

#### (a) Multilateral agreements

407. In at least two multilateral conventions, the concept of balance of interests is expressly stated in the preamble with reference to liability and compensation. The preamble to the 1960 Convention on Third Party Liability in the Field of Nuclear Energy expresses the desire of the contracting parties to ensure “adequate” and “equitable” compensation for individuals who suffer injury caused by nuclear incidents, without hindering the development of peaceful uses of nuclear energy. The relevant paragraphs of the preamble provide:

[The Contracting Governments,]

...

Desirous of ensuring adequate and equitable compensation for persons who suffer damage caused by nuclear incidents whilst taking the necessary steps to ensure that the development of the production and uses of nuclear energy for peaceful purposes is not thereby hindered;

Convinced of the need for unifying the basic rules applying in the various countries to the liability incurred for such damage, whilst leaving these countries free to take, on a national basis, any additional measures which they deem appropriate, including the application of the provisions of this Convention to damage caused by incidents due to ionizing radiations not covered therein;

408. The preamble to the 1952 Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface is even more explicit in stating its aim, namely, the balance of interests in determining liability and compensation. It states the desire of the contracting parties to ensure “adequate” compensation for injured persons, while *limiting in a reasonable manner the extent of the liabilities incurred for such damage*. The relevant paragraph of the preamble reads:

The States signatory to this Convention,

Moved by a desire to ensure adequate compensation for persons who suffer damage caused on the surface by foreign aircraft, while limiting in a reasonable manner the extent of the liabilities incurred for such damage in order not to hinder the development of international civil air transport,...

409. The 1976 Convention on Limitation of Liability for Maritime Claims is implicitly based on the accommodation and balancing of the interests of injured par-

<sup>112</sup> *Ibid.*, p. 22.

<sup>113</sup> *International Law Reports (1957)* (see footnote 67 above), pp. 123-124, para. 6 of the award.

ties with the interest of the larger community in protecting and promoting maritime transportation essential to the present-day world economy. Paragraph 1 of article 2 itemizes claims subject to limitation, as follows:

*Article 2. Claims subject to limitation*

1. . . .

(a) claims in respect of loss of life or personal injury or loss of or damage to property (including damage to harbour works, basins and waterways and aids to navigation), occurring on board or in direct connection with the operation of the ship or with salvage operations and consequential loss resulting therefrom;

(b) claims in respect of loss resulting from delay in the carriage by sea of cargo, passengers or their luggage;

(c) claims in respect of other loss resulting from infringement of rights other than contractual rights, occurring in direct connection with the operation of the ship or salvage operations;

(d) claims in respect of the raising, removal, destruction or the rendering harmless of a ship which is sunk, wrecked, stranded or abandoned, including anything that is or has been on board such ship;

(e) claims in respect of the removal, destruction or the rendering harmless of the cargo of the ship;

(f) claims of a person other than the person liable in respect of measures taken in order to avert or minimize loss for which the person liable may limit his liability in accordance with this Convention, and further loss caused by such measures.

Paragraph 2 of the same article provides that limitation on liability applies to these claims even if brought by way of recourse or for indemnity under a contract or otherwise. Only claims under subparagraphs (d), (e) and (f) shall not be subject to limitation of liability to the extent that they relate to remuneration under a contract with the person liable. Paragraph 2 provides:

2. Claims set out in paragraph 1 shall be subject to limitation of liability even if brought by way of recourse or for indemnity under a contract or otherwise. However, claims set out under paragraph 1 (d), (e) and (f) shall not be subject to limitation of liability to the extent that they relate to remuneration under a contract with the person liable.

410. This policy of accommodation and balancing of interests appears again in the 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, in which coastal States are granted competence to take unilateral action on the high seas to protect their own interests. This Convention accommodates the interests of the coastal State, by granting it the right to take unilateral action, with those of the flag State, the latter being entitled to compensation if the measures taken by the coastal State go beyond what is reasonable. The security interests of the flag State are also taken into account, in article I, paragraph 2, since the coastal State may take no action, under the Convention, if the ship involved in the casualty is a warship or other ship owned or operated by a State and used for the time being on government non-commercial service:

*Article I*

. . . .

2. However, no measures shall be taken under the present Convention against any warship or other ship owned or operated by a State and used, for the time being, only on government non-commercial service.

(b) *Bilateral agreements*

411. In bilateral agreements, the concept of balancing interests to determine liability and compensation is the same as that used to determine harm for purposes of

prior negotiation and consultation. However, the language used in connection with the balancing of interests in determining liability is less explicit in bilateral than in multilateral agreements. The reason may lie in the very nature of multilateral and bilateral agreements. Multilateral agreements are of a more general nature, dealing as they do with a more general set of activities, referring to more than two parties and accommodating various interests. To take account of all these factors it is necessary to use explicit language, for example, in balancing interests. By contrast, bilateral agreements are less complex, since they deal with a more precise subject; sometimes, indeed, a large part of the agreement sets out a detailed procedure for accommodating the two parties' interests when determining liability and compensation.

412. For example, article 27 of the 1922 Treaty between Germany and Denmark<sup>314</sup> is in fact based on the concept of balance of interests. Without mentioning the concept as such, the Treaty provides that the cost of upkeep, if increased by a new regulation of water-courses, shall be paid by those who benefit from the regulation regardless whether they previously shared the cost of upkeep or not:

*Article 27. Liability for upkeep after regularization*

If the cost of upkeep is increased by the regularization of a water-course, the increase shall be apportioned among all the proprietors to whom the regularization is of use or advantage, regardless of the fact whether they previously shared in the cost of upkeep or not.

The first paragraph of article 26 of the treaty also bears on the concept of balance of interests (see para. 394 above).

## B. Operator's liability

413. In activities conducted primarily by private entities, liability rests with the operator. Some activities are conducted by both private entities and government agencies, but in the latter case the régime of liability is directly based on that applying to the private operator, in other words, the relevant government agency (the operator) has the same liability as a private operator. This is true in particular in connection with activities involving the transport of goods and services by air, land and sea. This area of activities is predominantly controlled by the private sector, although government agencies are active in it too, but the principles of liability and compensation applying to government operators are the same as those applying to private operators. This similarity is apparent even in the requirement of carrying insurance before undertaking an activity.

414. The need to protect the interests of injured parties is one of the reasons for the uniform application of the rules on liability to both private and government operators. If different rules were established, based on the capacity of operators, then Governments might attempt to limit or avoid liability by subsidizing and sponsoring commercial activities normally conducted by private operators. Furthermore, given the commercial character of these activities, there is no justification for

<sup>314</sup> See footnote 59 above.

limiting or eliminating the liability of government operators.

(a) *Multilateral agreements*

415. The operator of activities causing extraterritorial damage or the insurer of the operator may be liable for damage. This is standard practice in conventions primarily concerned with commercial activities, such as the 1966 Additional Convention to the 1961 International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 25 February 1961 relating to the liability of the railway for death of and personal injury to passengers. Article 2 of the Convention reads in part:

*Article 2. Extent of liability*

1. The railway shall be liable for damage resulting from the death of, or personal injury or any other bodily or mental harm to, a passenger, caused by an accident arising out of the operation of the railway and happening while the passenger is in, entering or alighting from a train.

The railway shall also be liable for damage to, or total or partial loss of any articles which the passenger who has sustained such an accident had either on him or with him as hand luggage, including any animals which he had with him.

...

4. ...

If the railway is not relieved of liability in accordance with the preceding sub-paragraph, the railway shall be wholly liable up to the limits laid down in this Convention, but without prejudice to any right of action which the railway may have against the third party.

5. This Convention shall not affect any liability which may be incurred by the railway in cases not provided for under paragraph 1.

6. For the purposes of this Convention, the "responsible railway" is that which, according to the list of lines provided for in article 59 of CIV, operates the line on which the accident occurs. If, in accordance with the aforementioned list, there is joint operation of the line by two railways, each of them shall be liable.

The operators of railways may be private entities or government agencies. The Convention, however, makes no distinction between them as far as liability and compensation are concerned.

416. Similarly, the 1952 Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface provides for the liability of the operator of an aircraft causing injury to a person on the surface. The relevant articles of the Convention read:

PRINCIPLES OF LIABILITY

*Article 1*

1. Any person who suffers damage on the surface shall, upon proof only that the damage was caused by an aircraft in flight or by any person or thing falling therefrom, be entitled to compensation as provided by this Convention. Nevertheless there shall be no right to compensation if the damage is not a direct consequence of the incident giving rise thereto, or if the damage results from the mere fact of passage of the aircraft through the airspace in conformity with existing air traffic regulations.

2. For the purpose of this Convention, an aircraft is considered to be in flight from the moment when power is applied for the purpose of actual take-off until the moment when the landing run ends. In the case of an aircraft lighter than air, the expression "in flight" relates to the period from the moment when it becomes detached from the surface until it becomes again attached thereto.

*Article 2*

1. The liability for compensation contemplated by article 1 of this Convention shall attach to the operator of the aircraft.

2. (a) For the purposes of this Convention the term "operator" shall mean the person who was making use of the aircraft at the time

the damage was caused, provided that if control of the navigation of the aircraft was retained by the person from whom the right to make use of the aircraft was derived, whether directly or indirectly, that person shall be considered the operator.

(b) A person shall be considered to be making use of an aircraft when he is using it personally or when his servants or agents are using the aircraft in the course of their employment, whether or not within the scope of their authority.

3. The registered owner of the aircraft shall be presumed to be the operator and shall be liable as such unless, in the proceedings for the determination of his liability, he proves that some other person was the operator and, in so far as legal procedures permit, takes appropriate measures to make that other person a party in the proceedings.

*Article 3*

If the person who was the operator at the time the damage was caused had not the exclusive right to use the aircraft for a period of more than fourteen days, dating from the moment when the right to use commenced, the person from whom such right was derived shall be liable jointly and severally with the operator, each of them being bound under the provisions and within the limits of liability of this Convention.

*Article 4*

If a person makes use of an aircraft without the consent of the person entitled to its navigational control, the latter, unless he proves that he has exercised due care to prevent such use, shall be jointly and severally liable with the unlawful user for damage giving a right to compensation under article 1, each of them being bound under the provisions and within the limits of liability of this Convention.

*Article 5*

Any person who would otherwise be liable under the provisions of this Convention shall not be liable if the damage is the direct consequence of armed conflict or civil disturbance, or if such person has been deprived of the use of the aircraft by act of public authority.

*Article 6*

1. Any person who would otherwise be liable under the provisions of this Convention shall not be liable for damage if he proves that the damage was caused solely through the negligence or other wrongful act or omission of the person who suffers the damage or of the latter's servants or agents. If the person liable proves that the damage was contributed to by the negligence or other wrongful act or omission of the person who suffers the damage, or of his servants or agents, the compensation shall be reduced to the extent to which such negligence or wrongful act or omission contributed to the damage. Nevertheless there shall be no such exoneration or reduction if, in the case of the negligence or other wrongful act or omission of a servant or agent, the person who suffers the damage proves that his servant or agent was acting outside the scope of his authority.

2. When an action is brought by one person to recover damages arising from the death or injury of another person, the negligence or other wrongful act or omission of such other person, or of his servants or agents, shall also have the effect provided in the preceding paragraph.

*Article 7*

When two or more aircraft have collided or interfered with each other in flight and damage for which a right to compensation as contemplated in article 1 results, or when two or more aircraft have jointly caused such damage, each of the aircraft concerned shall be considered to have caused the damage and the operator of each aircraft shall be liable, each of them being bound under the provisions and within the limits of liability of this Convention.

*Article 8*

The persons referred to in paragraph 3 of article 2 and in articles 3 and 4 shall be entitled to all defences which are available to an operator under the provisions of this Convention.

*Article 9*

Neither the operator, the owner, any person liable under article 3 or article 4, nor their respective servants or agents, shall be liable for damage on the surface caused by an aircraft in flight or any person or thing falling therefrom otherwise than as expressly provided in this Convention. This rule shall not apply to any such person who is guilty of a deliberate act or omission done with intent to cause damage.



417. The operators of aircraft may also be private or government entities. The operators enjoy limitation on liability. Article 11 of the Convention reads:

EXTENT OF LIABILITY

*Article 11*

1. Subject to the provisions of article 12, the liability for damage giving a right to compensation under article 1, for each aircraft and incident, in respect of all persons liable under this Convention, shall not exceed:

- (a) 500,000 francs for aircraft weighing 1,000 kilogrammes or less;
- (b) 500,000 francs plus 400 francs per kilogramme over 1,000 kilogrammes for aircraft weighing more than 1,000 but not exceeding 6,000 kilogrammes;
- (c) 2,500,000 francs plus 250 francs per kilogramme over 6,000 kilogrammes for aircraft weighing more than 6,000 but not exceeding 20,000 kilogrammes;
- (d) 6,000,000 francs plus 150 francs per kilogramme over 20,000 kilogrammes for aircraft weighing more than 20,000 but not exceeding 50,000 kilogrammes;
- (e) 10,500,000 francs plus 100 francs per kilogramme over 50,000 kilogrammes for aircraft weighing more than 50,000 kilogrammes.

2. The liability in respect of loss of life or personal injury shall not exceed 500,000 francs per person killed or injured.

3. "Weight" means the maximum weight of the aircraft authorized by the certificate of airworthiness for take-off, excluding the effect of lifting gas when used.

4. The sums mentioned in francs in this article refer to a currency unit consisting of 65.5 milligrammes of gold of millesimal fineness 900. These sums may be converted into national currencies in round figures. Conversion of the sums into national currencies other than gold shall, in case of judicial proceedings, be made according to the gold value of such currencies at the date of the judgment, or, in cases covered by article 14, at the date of the allocation.

418. The operators do not enjoy limitation on liability if the injury was due to their negligence. Article 12 reads:

*Article 12*

1. If the person who suffers damage proves that it was caused by a deliberate act or omission of the operator, his servants or agents, done with intent to cause damage, the liability of the operator shall be unlimited; provided that in the case of such act or omission of such servant or agent, it is also proved that he was acting in the course of his employment and within the scope of his authority.

2. If a person wrongfully takes and makes use of an aircraft without the consent of the person entitled to use it, his liability shall be unlimited.

419. In some circumstances, liability can be imputed to the insurer of the aircraft. The relevant paragraphs of article 16 read:

*Article 16*

...

5. Without prejudice to any right of direct action which he may have under the law governing the contract of insurance or guarantee, the person suffering damage may bring a direct action against the insurer or guarantor only in the following cases:

- (a) where the security is continued in force under the provisions of paragraph 1 (a) and (b) of this article;
- (b) the bankruptcy of the operator.

6. Excepting the defences specified in paragraph 1 of this article, the insurer or other person providing security may not, with respect to direct actions brought by the person suffering damage based upon application of this Convention, avail himself of any grounds of nullity or any right of retroactive cancellation.

7. The provisions of this article shall not prejudice the question whether the insurer or guarantor has a right of recourse against any other person.

420. The two aforementioned conventions provide for limited liability. Both deal with the transport of goods and services across boundaries, an operation essential to modern civilization. It is interesting to note that article 12 of the 1952 Convention relating to damage caused by foreign aircraft allows of no limitation of liability if the operator is negligent (para. 1), and if a person wrongfully seizes and uses an aircraft without the consent of the person entitled to use it (para. 2).

421. The 1962 Convention on the Liability of Operators of Nuclear Ships also provides for the liability of the operator of nuclear ships, who may be either a private or a public entity. The relevant articles of the Convention read:

*Article II*

1. The operator of a nuclear ship shall be absolutely liable for any nuclear damage upon proof that such damage has been caused by a nuclear incident involving the nuclear fuel of, or radioactive products or waste produced in, such ship.

2. Except as otherwise provided in this Convention no person other than the operator shall be liable for such nuclear damage.

3. Nuclear damage suffered by the nuclear ship itself, its equipment, fuel or stores shall not be covered by the operator's liability as defined in this Convention.

4. The operator shall not be liable with respect to nuclear incidents occurring before the nuclear fuel has been taken in charge by him or after the nuclear fuel or radioactive products or waste have been taken in charge by another person duly authorized by law and liable for any nuclear damage that may be caused by them.

5. If the operator proves that the nuclear damage resulted wholly or partially from an act or omission done with intent to cause damage by the individual who suffered the damage, the competent courts may exonerate the operator wholly or partially from his liability to such individual.

6. Notwithstanding the provisions of paragraph 1 of this Article, the operator shall have a right of recourse:

(a) If the nuclear incident results from a personal act or omission done with intent to cause damage, in which event recourse shall lie against the individual who has acted, or omitted to act, with such intent;

(b) If the nuclear incident occurred as a consequence of any wreckraising operation, against the person or persons who carried out such operation without the authority of the operator or of the State having licensed the sunken ship or of the State in whose waters the wreck is situated;

(c) If recourse is expressly provided for by contract.

*Article III*

1. The liability of the operator as regards one nuclear ship shall be limited to 1500 million francs in respect of any one nuclear incident, notwithstanding that the nuclear incident may have resulted from any fault or privity of that operator; such limit shall include neither any interest nor costs awarded by a court in actions for compensation under this Convention.

...

*Article VII*

1. Where nuclear damage engages the liability of more than one operator and the damage attributable to each operator is not reasonably separable, the operators involved shall be jointly and severally liable for such damage. However, the liability of any one operator shall not exceed the limit laid down in article III.

2. In the case of a nuclear incident where the nuclear damage arises out of or results from nuclear fuel or radioactive products or waste of more than one nuclear ship of the same operator, that operator shall be liable in respect of each ship up to the limit laid down in article III.

3. In case of joint and several liability, and subject to the provisions of paragraph 1 of this article:

(a) Each operator shall have a right of contribution against the others in proportion to the fault attaching to each of them;

(b) Where circumstances are such that the degree of fault cannot be apportioned, the total liability shall be borne in equal parts.

422. Similarly, the 1969 International Convention on Civil Liability for Oil Pollution Damage provides for liability of the owner of the ship at the time of an accident. There too the operator of a ship may be a private or a government entity. The relevant articles of the Convention read:

#### Article III

1. Except as provided in paragraphs 2 and 3 of this article, the owner of a ship at the time of an incident, or where the incident consists of a series of occurrences at the time of the first such occurrence, shall be liable for any pollution damage caused by oil which has escaped or been discharged from the ship as a result of the incident.

#### Article IV

When oil has escaped or has been discharged from two or more ships, and pollution damage results therefrom, the owners of all the ships concerned, unless exonerated under article III, shall be jointly and severally liable for all such damage which is not reasonably separable.

#### Article V

1. The owner of a ship shall be entitled to limit his liability under this Convention in respect of any one incident to an aggregate amount of 2,000 francs for each ton of the ship's tonnage. However, this aggregate amount shall not in any event exceed 210 million francs.

2. If the incident occurred as a result of the actual fault or privity of the owner, he shall not be entitled to avail himself of the limitation provided in paragraph 1 of this article.

423. Claims for compensation may also be brought directly against the insurer of the owner. Paragraph 8 of article VII of the Convention reads:

#### Article VII

8. Any claim for compensation for pollution damage may be brought directly against the insurer or other person providing financial security for the owner's liability for pollution damage. In such case the defendant may, irrespective of the actual fault or privity of the owner, avail himself of the limits of liability prescribed in article V, paragraph 1. He may further avail himself of the defences (other than the bankruptcy or winding up of the owner) which the owner himself would have been entitled to invoke. Furthermore, the defendant may avail himself of the defence that the pollution damage resulted from the wilful misconduct of the owner himself, but the defendant shall not avail himself of any other defence which he might have been entitled to invoke in proceedings brought by the owner against him. The defendant shall in any event have the right to require the owner to be joined in the proceedings.

424. The preamble to the 1971 Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material explicitly states the desire of the contracting parties to hold the operator of a nuclear installation *exclusively* liable for damage caused as a result of any incident occurring during the maritime carriage of nuclear material. The relevant paragraph of the preamble states:

Desirous of ensuring that the operator of a nuclear installation will be exclusively liable for damage caused by a nuclear incident occurring in the course of maritime carriage of nuclear material,

425. The liability of the operator of a nuclear installation for the injuries it may cause is also stipulated in article II of the 1963 Vienna Convention on Civil Liability for Nuclear Damage:

#### Article II

1. The operator of a nuclear installation shall be liable for nuclear damage upon proof that such damage has been caused by a nuclear incident:

- (a) in his nuclear installation; or
- (b) involving nuclear material coming from or originating in his nuclear installation, and occurring:
  - (i) before liability with regard to nuclear incidents involving the nuclear material has been assumed, pursuant to the express terms of a contract in writing, by the operator of another nuclear installation;
  - (ii) in the absence of such express terms, before the operator of another nuclear installation has taken charge of the nuclear material; or
  - (iii) where the nuclear material is intended to be used in a nuclear reactor with which a means of transport is equipped for use as a source of power, whether for propulsion thereof or for any other purpose, before the person duly authorized to operate such reactor has taken charge of the nuclear material; but
  - (iv) where the nuclear material has been sent to a person within the territory of a non-Contracting State, before it has been unloaded from the means of transport by which it has arrived in the territory of that non-Contracting State;
- (c) involving nuclear material sent to his nuclear installation, and occurring:
  - (i) after liability with regard to nuclear incidents involving the nuclear material has been assumed by him, pursuant to the express terms of a contract in writing, from the operator of another nuclear installation;
  - (ii) in the absence of such express terms, after he has taken charge of the nuclear material; or
  - (iii) after he has taken charge of the nuclear material from a person operating a nuclear reactor with which a means of transport is equipped for use as a source of power, whether for propulsion thereof or for any other purpose; but
  - (iv) where the nuclear material has, with the written consent of the operator, been sent from a person within the territory of a non-Contracting State, only after it has been loaded on the means of transport by which it is to be carried from the territory of that State;

provided that, if nuclear damage is caused by a nuclear incident occurring in a nuclear installation and involving nuclear material stored therein incidentally to the carriage of such material, the provisions of sub-paragraph (a) of this paragraph shall not apply where another operator or person is solely liable pursuant to the provisions of sub-paragraph (b) or (c) of this paragraph.

2. The Installation State may provide by legislation that, in accordance with such terms as may be specified therein, a carrier of nuclear material or a person handling radioactive waste may, at his request and with the consent of the operator concerned, be designated or recognized as operator in the place of that operator in respect of such nuclear material or radioactive waste respectively. In this case such carrier or such person shall be considered, for all the purposes of this Convention, as an operator of a nuclear installation situated within the territory of that State.

3. (a) Where nuclear damage engages the liability of more than one operator, the operators involved shall, in so far as the damage attributable to each operator is not reasonably separable, be jointly and severally liable.

(b) Where a nuclear incident occurs in the course of carriage of nuclear material, either in one and the same means of transport, or, in the case of storage incidental to the carriage, in one and the same nuclear installation, and causes nuclear damage which engages the liability of more than one operator, the total liability shall not exceed the highest amount applicable with respect to any one of them pursuant to article V.

(c) In neither of the cases referred to in sub-paragraphs (a) and (b) of this paragraph shall the liability of any one operator exceed the amount applicable with respect to him pursuant to article V.

4. Subject to the provisions of paragraph 3 of this article, where several nuclear installations of one and the same operator are involved in one nuclear incident, such operator shall be liable in respect of each nuclear installation involved up to the amount applicable with respect to him pursuant to article V.

5. Except as otherwise provided in this Convention, no person other than the operator shall be liable for nuclear damage. This, however, shall not affect the application of any international convention in the field of transport in force or open for signature, ratification or accession at the date on which this Convention is opened for signature.

6. No person shall be liable for any loss or damage which is not nuclear damage pursuant to sub-paragraph (k) of paragraph 1 of article 1 but which could have been included as such pursuant to sub-paragraph (k) (ii) of that paragraph.

7. Direct action shall lie against the person furnishing financial security pursuant to article VII, if the law of the competent court so provides.

**426. Under article IV of the Convention, the operator's liability is absolute. The article reads in part:**

#### *Article IV*

1. The liability of the operator for nuclear damage under this Convention shall be absolute.

...

7. Nothing in this Convention shall affect:

(a) the liability of any individual for nuclear damage for which the operator, by virtue of paragraph 3 or 5 of this article, is not liable under this Convention and which that individual caused by an act or omission done with intent to cause damage; or

(b) the liability outside this Convention of the operator for nuclear damage for which, by virtue of sub-paragraph (b) of paragraph 5 of this article, he is not liable under this Convention.

**427. Under article V, the installation State may limit the operator's liability, but to not less than \$5 million for any one nuclear incident:**

#### *Article V*

1. The liability of the operator may be limited by the Installation State to not less than US \$5 million for any one nuclear incident.

2. Any limits of liability which may be established pursuant to this article shall not include any interest or costs awarded by a court in actions for compensation of nuclear damage.

3. The United States dollar referred to in this Convention is a unit of account equivalent to the value of the United States dollar in terms of gold on 29 April 1963, that is to say US \$35 per one troy ounce of fine gold.

4. The sum mentioned in paragraph 6 of article IV and in paragraph 1 of this article may be converted into national currency in round figures.

**428. The provisions of the 1960 Convention on Third Party Liability in the Field of Nuclear Energy concerning the liability of the nuclear operator are as follows:**

#### *Article 3*

(a) The operator of a nuclear installation shall be liable, in accordance with this Convention, for:

(i) damage to or loss of life of any person; and

(ii) damage to or loss of any property other than

1. the nuclear installation itself and any property on the site of that installation which is used or to be used in connection with that installation;

2. in the cases within article 4, the means of transport upon which the nuclear substances involved were at the time of the nuclear incident,

upon proof that such damage or loss (hereinafter referred to as "damage") was caused by a nuclear incident involving either nuclear fuel or radioactive products or waste in, or nuclear substances coming from such installation, except as otherwise provided for in article 4.

(b) Where the damage or loss is caused jointly by a nuclear incident and by an incident other than a nuclear incident, that part of the damage or loss which is caused by such other incident shall, to the extent that it is not reasonably separable from the damage or loss caused by the nuclear incident, be considered to be damage caused by the nuclear incident. Where the damage or loss is caused jointly by a

nuclear incident and by an emission of ionizing radiation not covered by this Convention, nothing in this Convention shall limit or otherwise affect the liability of any person in connection with that emission of ionizing radiation.

(c) Any Contracting Party may by legislation provide that the liability of the operator of a nuclear installation situated in its territory shall include liability for damage which arises out of or results from ionizing radiations emitted by any source of radiation inside that installation, other than those referred to in paragraph (a) of this article.

#### *Article 4*

In the case of carriage of nuclear substances, including storage incidental thereto, without prejudice to article 2:

(a) The operator of a nuclear installation shall be liable, in accordance with this Convention, for damage upon proof that it was caused by a nuclear incident outside that installation and involving nuclear substances in the course of carriage therefrom, only if the incident occurs:

(i) before liability with regard to nuclear incidents involving the nuclear substances has been assumed, pursuant to the express terms of a contract in writing, by the operator of another nuclear installation;

(ii) in the absence of such express terms, before the operator of another nuclear installation has taken charge of the nuclear substances; or

(iii) where the nuclear substances are intended to be used in a reactor comprised in a means of transport, before the person duly authorized to operate that reactor has taken charge of the nuclear substances; but

(iv) where the nuclear substances have been sent to a person within the territory of a non-Contracting State, before they have been unloaded from the means of transport by which they have arrived in the territory of that non-Contracting State.

(b) The operator of a nuclear installation shall be liable, in accordance with this Convention, for damage upon proof that it was caused by a nuclear incident outside that installation and involving nuclear substances in the course of carriage thereto, only if the incident occurs:

(i) after liability with regard to nuclear incidents involving the nuclear substances has been assumed by him, pursuant to the express terms of a contract in writing, from the operator of another nuclear installation;

(ii) in the absence of such express terms, after he has taken charge of the nuclear substances; or

(iii) after he has taken charge of the nuclear substances from a person operating a reactor comprised in a means of transport; but

(iv) where the nuclear substances have, with the written consent of the operator, been sent from a person within the territory of a non-Contracting State, after they have been loaded on the means of transport by which they are to be carried from the territory of that State.

(c) The operator liable in accordance with this Convention shall provide the carrier with a certificate issued by or on behalf of the insurer or other financial guarantor furnishing the security required pursuant to article 10. The certificate shall state the name and address of that operator and the amount, type and duration of the security, and these statements may not be disputed by the person by whom or on whose behalf the certificate was issued. The certificate shall also indicate the nuclear substances and the carriage in respect of which the security applies and shall include a statement by the competent public authority that the person named is an operator within the meaning of this Convention.

(d) A Contracting Party may provide by legislation that, under such terms as may be contained therein and upon fulfilment of the requirements of article 10 (a), a carrier may, at his request and with the consent of an operator of a nuclear installation situated in its territory, by decision of the competent public authority, be liable in accordance with this Convention in place of that operator. In such case for all the purposes of this Convention the carrier shall be considered, in respect of nuclear incidents occurring in the course of carriage of nuclear substances, as an operator of a nuclear installation on the territory of the Contracting Party whose legislation so provides.

#### *Article 5*

(a) If the nuclear fuel or radioactive products or waste involved in a nuclear incident have been in more than one nuclear installation and

are in a nuclear installation at the time damage is caused, no operator of any nuclear installation in which they have previously been shall be liable for the damage.

(b) Where, however, damage is caused by a nuclear incident occurring in a nuclear installation and involving only nuclear substances stored therein incidentally to their carriage, the operator of the nuclear installation shall not be liable where another operator or person is liable pursuant to article 4.

(c) If the nuclear fuel or radioactive products or waste involved in a nuclear incident have been in more than one nuclear installation and are not in a nuclear installation at the time damage is caused, no operator other than the operator of the last nuclear installation in which they were before the damage was caused or an operator who has subsequently taken them in charge shall be liable for the damage.

(d) If damage gives rise to liability of more than one operator in accordance with this Convention, the liability of these operators shall be joint and several; provided that where such liability arises as a result of damage caused by a nuclear incident involving nuclear substances in the course of carriage in one and the same means of transport, or, in the case of storage incidental to the carriage, in one and the same nuclear installation, the maximum total amount for which such operators shall be liable shall be the highest amount established with respect to any of them pursuant to article 7 and provided that in no case shall any one operator be required, in respect of a nuclear incident, to pay more than the amount established with respect to him pursuant to article 7.

#### Article 6

(a) The right to compensation for damage caused by a nuclear incident may be exercised only against an operator liable for the damage in accordance with this Convention, or, if a direct right of action against the insurer or other financial guarantor furnishing the security required pursuant to article 10 is given by national law, against the insurer or other financial guarantor.

(b) Except as otherwise provided in this article, no other person shall be liable for damage caused by a nuclear incident, but this provision shall not affect the application of any international agreement in the field of transport in force or open for signature, ratification or accession at the date of this Convention.

(c) (i) Nothing in this Convention shall affect the liability:

1. of any individual for damage caused by a nuclear incident for which the operator, by virtue of article 3 (a) (ii) (1) and (2) or article 9, is not liable under this Convention and which results from an act or omission of that individual done with intent to cause damage;
2. of a person duly authorized to operate a reactor comprised in a means of transport for damage caused by a nuclear incident when an operator is not liable for such damage pursuant to article 4 (a) (iii) or (b) (iii).

(ii) The operator shall incur no liability outside this Convention for damage caused by a nuclear incident except where use has not been made of the right provided for in article 7 (c), and then only to the extent that national legislation or the legislation of the Contracting Party in whose territory the nuclear installation of the operator liable is situated has made specific provisions concerning damage to the means of transport.

(d) Any person who has paid compensation in respect of damage caused by a nuclear incident under any international agreement referred to in paragraph (b) of this article or under any legislation of a non-Contracting State shall, up to the amount which he has paid, acquire by subrogation the rights under this Convention of the person suffering damage whom he has so compensated.

(e) Any person who has his principal place of business in the territory of a Contracting Party or who is the servant of such a person and who has paid compensation in respect of damage caused by a nuclear incident occurring in the territory of a non-Contracting State or in respect of damage suffered in such territory shall, up to the amount which he has paid, acquire the rights which the person so compensated would have had against the operator but for the provisions of article 2.

(f) The operator shall have a right of recourse only:

- (i) if the damage caused by a nuclear incident results from an act or omission done with intent to cause damage, against the individual acting or omitting to act with such intent;
- (ii) if and to the extent that it is so provided expressly by contract.

(g) If the operator has a right of recourse to any extent pursuant to paragraph (f) of this article against any person, that person shall not, to that extent, have a right against the operator under paragraphs (d) or (e) of this article.

(h) Where provisions of national or public health insurance, social security, workmen's compensation or occupational disease compensation systems include compensation for damage caused by a nuclear incident, rights of beneficiaries of such systems and rights of recourse by virtue of such systems shall be determined by the law of the Contracting Party or by the regulations of the inter-Governmental organization which has established such systems.

429. The operator's liability is formulated in more general terms in the 1974 Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden, article 3 of which provides that the injured party shall have access to local courts or the administrative authority of the State in whose territory the act causing damage has occurred:

#### Article 3

Any person who is affected or may be affected by a nuisance caused by environmentally harmful activities in another Contracting State shall have the right to bring before the appropriate Court or Administrative Authority of that State the question of the permissibility of such activities, including the question of measures to prevent damage, and to appeal against the decision of the Court or the Administrative Authority to the same extent and on the same terms as a legal entity of the State in which the activities are being carried out.

The provisions of the first paragraph of this article shall be equally applicable in the case of proceedings concerning compensation for damage caused by environmentally harmful activities. The question of compensation shall not be judged by rules which are less favourable to the injured party than the rules of compensation of the State in which the activities are being carried out.

The Protocol to the Convention further provides:

...

The right established in article 3 for anyone who suffers injury as a result of environmentally harmful activities in a neighbouring State to institute proceedings for compensation before a court or administrative authority of that State shall, in principle, be regarded as including the right to demand the purchase of his real property.

...

430. The draft convention on liability and compensation in connection with the carriage of noxious and hazardous substances by sea, prepared by IMO in 1984, provides in article 3 for the liability of the owner of the ship carrying hazardous substances, and in article 7 for that of the shipper if the injured person has been unable to obtain from the owner full compensation for the damage, in accordance with the Convention. The relevant provisions of articles 3 and 7 are as follows:

#### Article 3

1. Except as provided in paragraphs 2 and 3, the owner at the time of an incident of a ship carrying hazardous substances as cargo shall be liable for damage caused by any such substance during its carriage by sea, provided that if an incident consists of a series of occurrences having the same origin the liability shall attach to the owner at the time of the first of such occurrences.

...

#### Article 7

1. The shipper of a hazardous substance shall be liable to pay compensation to any person suffering damage caused by that substance during its carriage by sea if such person has been unable to obtain from the owner full compensation for the damage under this Convention:

(a) because the damage exceeds the owner's liability under this Convention as limited in accordance with article 6;

(b) because the owner liable for the damage under article 3 is financially incapable of meeting his obligations in full; an owner being

treated as financially incapable of meeting his obligations if the person suffering the damage has been unable to obtain full satisfaction of the amount of compensation due under the present Convention after having taken all reasonable steps to pursue the legal remedies available to him.

### (b) *Bilateral agreements*

431. Some bilateral agreements provide for the liability of the operator of an activity causing extra-territorial injury. Thus the 1973 Agreement between Norway and the United Kingdom<sup>315</sup> and the 1974 Agreement between the Federal Republic of Germany and Norway,<sup>316</sup> relating to the transmission of petroleum from the Ekofisk field, expressly state—the former in article 11, the latter in article 12—that the licensees are liable for pollution damage, including the costs of preventive and remedial action (see paras. 350 and 351 above, respectively).

432. The 1973 Agreement between Norway and the United Kingdom provides further, in article 4, that the pipeline company shall be subject to Norwegian law for the purposes of civil and criminal jurisdiction as well as of enforcement:

#### *Article 4*

The pipeline company shall be subject to Norwegian law and jurisdiction as regards civil and criminal proceedings, forum and enforcement. This shall also apply in relation to the pipeline and incidents pertaining thereto; it being understood, however, that this shall not exclude the concurrent jurisdiction of the United Kingdom courts and the application of United Kingdom law subject to the rules of United Kingdom law governing the conflict of laws.

433. Operator liability is provided for in the 1971 Agreement between Finland and Sweden concerning frontier rivers. Chapter 7 of the Agreement, dealing with compensation, provides, in article 1, that any person who is granted the right to use property belonging to a third party is liable for injuries resulting from such use:

#### *Article 1*

Any person who is granted the right under this Agreement to use property belonging to a third party, to use water power belonging to a third party or to take measures which otherwise cause damage or inconvenience to property belonging to a third party shall be liable to pay compensation for the property used or for the loss, damage or inconvenience caused.

Save as otherwise provided, compensation shall be fixed at the same time that permission is granted for the measure in question.

434. The 1922 Convention between Germany and Denmark<sup>317</sup> provides, in article 26, for the liability *not* of the operator of the activity, *but* of the persons who benefit from the activity, and authorizes a joint commission to decide on certain measures regarding the joint waters. Those who have suffered injuries from the new measures have the right to full compensation from those who benefit from those measures:

#### *Article 26. Compensation for damage caused by regularization*

Any person who suffers loss or damage in consequence of the regularization or of the alteration in the condition of the watercourse occasioned by such regularization has the right to claim full compensation from the person who benefits by the work in question. The matter shall be decided by the Frontier Water Commission.

The riparian proprietors must permit, subject to compensation, the erection at or in the watercourse of subsidiary works necessary to carry out the regularization of a river bed, the deposit of earth, stones, gravel, sand, wood, etc., on the land on the banks, the transport to and fro of such materials and the storing and transport to and fro of building materials, and must also grant regular right of access to the workmen and inspectors.

These provisions are also applicable to land situated behind the riparian land and to the proprietors thereof.

In the absence of agreement, the Frontier Water Commission shall determine the amount of compensation.

The Convention stipulates further, in article 27, that, if the cost of upkeep is increased by the new measures, such increase shall be borne by those who benefit from them (see para. 412 above).

### (c) *Judicial decisions and State practice other than agreements*

435. No clear picture of the liability of the operator can be derived from judicial decisions or official correspondence. These sources indicate no instances where the operator has been held to be solely liable for payment of compensation for injuries resulting from his activities. In the case of some incidents, private operators have voluntarily paid compensation and taken unilateral action to minimize or prevent injuries, but without admitting liability. It is obviously difficult to determine the real reason for the unilateral and voluntary action. But it would not be entirely correct to assume that this action was taken solely on "moral" grounds. The factors of pressure from the home Government, public opinion, or the necessity of a relaxed atmosphere for doing business, should not be underestimated. All these pressures lead to the creation of an *expectation* which is stronger than a mere *moral obligation*.

436. In 1972, the *World Bond*, a tanker registered in Liberia, leaked 12,000 gallons of crude oil into the sea while unloading at the refinery of the Atlantic Richfield Corporation, at *Cherry Point*, in the State of Washington. The oil spread to Canadian waters and befouled five miles of beaches in British Columbia. The spill was relatively small, but it had major political repercussions. Prompt action was taken both by the refinery and by the authorities on either side of the frontier to contain and limit the damage, so that the injury to Canadian waters and shorelines could be minimized. The cost of the clean-up operations was borne by the private operator, the Atlantic Petroleum Corporation.<sup>318</sup>

437. In the case of the transfrontier pollution caused by the activities of the *Peyton Packing Company* and the *Casuco Company*, action was taken unilaterally by those two United States companies to remedy the injury (see para. 324 above). Similarly, in the *Trail Smelter* case, the Canadian operator, the Consolidated Mining and Smelting Company, acted unilaterally to repair the damage caused by the plant's activities in the State of Washington. On the other hand, in the case of an oil prospection project contemplated by a private Canadian corporation in the *Beaufort Sea*, near the Alaskan border, the Canadian Government undertook to ensure

<sup>315</sup> See footnote 250 above.

<sup>316</sup> See footnote 14 above.

<sup>317</sup> See footnote 59 above.

<sup>318</sup> See *The Canadian Yearbook of International Law* 1973 (Vancouver), vol. XI, pp. 333-334.

compensation for any damage that might be caused in the United States in the event that the guarantees furnished by the corporation proved insufficient (see para. 357 above).

### C. State liability

438. Past trends demonstrate that States have been held liable for injuries caused to other States and their nationals as a result of activities occurring within their territorial jurisdiction or under their control. Even treaties imposing liability on the operators of activities have not in all cases exempted States from liability.

#### (a) Multilateral agreements

439. In some multilateral treaties, States have agreed to be held liable for injuries caused by activities occurring within their territorial jurisdiction or under their control. Some conventions regulating activities undertaken mostly by private operators impose certain responsibilities upon the State to ensure that its operators abide by those regulations. If the State fails to do so, it is held liable for the injuries the operator causes. For example, under paragraph 2 of article III of the 1962 Convention on the Liability of Operators of Nuclear Ships, the operator is required to maintain insurance or other financial security covering his liability for nuclear damage in such forms as the licensing State specifies. Furthermore, the licensing State has to ensure the payment of claims for compensation for nuclear damage established against the operator by providing the necessary funds up to the limit laid down in paragraph 1 of article III, to the extent that the yield of the insurance or the financial security is inadequate to satisfy such claims (see para. 342 above). Hence the licensing State is obliged to ensure that the insurance of the operator or the owner of the nuclear ship satisfies the requirements of the Convention. Otherwise the State itself is liable and has to pay compensation. In addition, under article XV of the Convention, the State is required to take all necessary measures to prevent a nuclear ship flying its flag from operating without a licence. If a State fails to do so, and a nuclear ship flying its flag causes injury to others, the flag State is considered to be the licensing State, and it will be held liable for compensation to victims in accordance with the obligations laid down in article III. Article XV of the Convention reads:

#### Article XV

1. Each Contracting State undertakes to take all measures necessary to prevent a nuclear ship flying its flag from being operated without a licence or authority granted by it.
2. In the event of nuclear damage involving the nuclear fuel of, or radioactive products or waste produced in, a nuclear ship flying the flag of a Contracting State, the operation of which was not at the time of the nuclear incident licensed or authorized by such Contracting State, the owner of the nuclear ship at the time of the nuclear incident shall be deemed to be the operator of the nuclear ship for all the purposes of this Convention, except that his liability shall not be limited in amount.
3. In such an event, the Contracting State whose flag the nuclear ship flies shall be deemed to be the licensing State for all the purposes of this Convention and shall, in particular, be liable for compensation for victims in accordance with the obligations imposed on a licensing State by article III and up to the limit laid down therein.

4. Each Contracting State undertakes not to grant a licence or other authority to operate a nuclear ship flying the flag of another State. However, nothing in this paragraph shall prevent a Contracting State from implementing the requirements of its national law concerning the operation of a nuclear ship within its internal waters and territorial sea.

440. For activities involving primarily States, the States themselves have accepted liability. Such is the case under the 1972 Convention on International Liability for Damage Caused by Space Objects. Article II of the Convention provides for the *absolute* liability of the launching State for damage caused by its space object:

#### Article II

A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft in flight.

441. In the event of an accident involving two space objects and causing injury to a third State or its nationals, both launching States are liable to the third State, as provided in article IV:

#### Article IV

1. In the event of damage being caused elsewhere than on the surface of the earth to a space object of one launching State or to persons or property on board such a space object by a space object of another launching State, and of damage thereby being caused to a third State or to its natural or juridical persons, the first two States shall be jointly and severally liable to the third State, to the extent indicated by the following:

- (a) If the damage has been caused to the third State on the surface of the earth or to aircraft in flight, their liability to the third State shall be absolute;
- (b) If the damage has been caused to a space object of the third State or to persons or property on board, that space object elsewhere than on the surface of the earth, their liability to the third State shall be based on the fault of either of the first two States or on the fault of persons for whom either is responsible.

2. In all cases of joint and several liability referred to in paragraph 1 of this article, the burden of compensation for the damage shall be apportioned between the first two States in accordance with the extent to which they were at fault: if the extent of the fault of each of these States cannot be established, the burden of compensation shall be apportioned equally between them. Such apportionment shall be without prejudice to the right of the third State to seek the entire compensation due under this Convention from any or all of the launching States which are jointly and severally liable.

442. Furthermore, article V provides that, when two or more States jointly launch a space object, they are both jointly and severally liable for any damage the space object may cause:

#### Article V

1. Whenever two or more States jointly launch a space object, they shall be jointly and severally liable for any damage caused.
2. A launching State which has paid compensation for damage shall have the right to present a claim for indemnification to other participants in the joint launching. The participants in a joint launching may conclude agreement regarding the apportioning among themselves of the financial obligation in respect of which they are jointly and severally liable. Such agreements shall be without prejudice to the right of a State sustaining damage to seek the entire compensation due under this Convention from any or all of the launching States which are jointly and severally liable.
3. A State from whose territory or facility a space object is launched shall be regarded as a participant in a joint launching.

443. Paragraphs 1 and 2 of article XXII provide that, if the launching entity is an international organization, it has the same liability as a launching State:

*Article XXII*

1. In this Convention, with the exception of articles XXIV to XXVII, reference to States shall be deemed to apply to any international intergovernmental organization which conducts space activities if the organization declares its acceptance of the rights and obligations provided for in this Convention and if a majority of the States members of the organization are States Parties to this Convention and to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

2. States members of any such organization which are States Parties to this Convention shall take all appropriate steps to ensure that the organization makes a declaration in accordance with the preceding paragraph.

Article XXII further provides, in paragraphs 3 and 4, that, independently of the launching international organization, those of its members which are parties to the Convention are also jointly and severally liable:

3. If an international intergovernmental organization is liable for damage by virtue of the provisions of this Convention, that organization and those of its members which are States Parties to this Convention shall be jointly and severally liable; provided, however, that:

(a) any claim for compensation in respect of such damage shall be first presented to the organization;

(b) only where the organization has not paid, within a period of six months, any sum agreed or determined to be due as compensation for such damage, may the claimant State invoke the liability of the members which are States Parties to this Convention for the payment of that sum.

4. Any claim, pursuant to the provision of this Convention, for compensation is respect of damage caused to an organization which has made a declaration in accordance with paragraph 1 of this article shall be presented by a State member of the organization which is a State Party to this Convention.

444. Finally, the 1982 United Nations Convention on the Law of the Sea provides in article 139 that States parties to the Convention shall ensure that activities in the Area, whether carried out by the State or its nationals, are in conformity with the Convention. When a State party fails to carry out its obligation it will be liable for damage. The same liability is imposed upon an international organization for activities in the Area. In this case, States members of international organizations acting together bear joint and several liability. States members of international organizations involved in activities in the Area must ensure the implementation of the requirements of the Convention with respect to those international organizations. Article 139 of the Convention reads:

*Article 139. Responsibility to ensure compliance and liability for damage*

1. States Parties shall have the responsibility to ensure that activities in the Area, whether carried out by States Parties, or State enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals, shall be carried out in conformity with this part. The same responsibility applies to international organizations for activities in the Area carried out by such organizations.

2. Without prejudice to the rules of international law and annex III, article 22, damage caused by the failure of a State Party or international organization to carry out its responsibilities under this part shall entail liability; States Parties or international organizations acting together shall bear joint and several liability. A State Party shall not however be liable for damage caused by any failure to comply with this part by a person whom it has sponsored under article 153, paragraph 2 (b), if the State Party has taken all necessary and appropriate measures to secure effective compliance under article 153, paragraph 4, and annex III, article 4, paragraph 4.

3. States Parties that are members of international organizations shall take appropriate measures to ensure the implementation of this article with respect to such organizations.

445. Similarly, article 263 of the Convention provides that States and international organizations shall be liable for damage caused by pollution of the marine environment arising out of marine scientific research undertaken by them or on their behalf. States and international organizations are also liable for the measures they take which violate the Convention in respect of marine scientific research undertaken by other States and their nationals, and by international organizations. If those measures cause injury, they must pay compensation. Article 263 of the Convention reads:

*Article 263. Responsibility and liability*

1. States and competent international organizations shall be responsible for ensuring that marine scientific research, whether undertaken by them or on their behalf, is conducted in accordance with this Convention.

2. States and competent international organizations shall be responsible and liable for the measures they take in contravention of this Convention in respect of marine scientific research conducted by other States, their natural or juridical persons or by competent international organizations, and shall provide compensation for damage resulting from such measures.

3. States and competent international organizations shall be responsible and liable pursuant to article 235 for damage caused by pollution of the marine environment arising out of marine scientific research undertaken by them or on their behalf.

*(b) Bilateral agreements*

446. One bilateral agreement refers to State liability for *injuries caused by fault or by deliberate* destructive activities. The 1948 Agreement between Poland and the USSR concerning their frontier régime<sup>319</sup> provides, in article 14, for the liability of a contracting party causing material damage as a result of failure to keep the frontier river in proper order and to prevent deliberate destruction of the banks of the frontier rivers and lakes. Article 14 of chapter I of the Agreement reads in part:

*Article 14*

1. The Contracting Parties shall see that frontier waters are kept in proper order. They shall also take appropriate steps to prevent deliberate destruction of the banks of frontier rivers and lakes.

2. If, through the fault of one Contracting Party material damage is caused to the other Contracting Party as a result of failure to carry out the provisions of paragraph 1 of this article, compensation for such damage shall be paid by the Party responsible therefor.

...

447. Yugoslavia and Hungary also recognize the liability of both parties for any damage resulting from *failure to respect the requirements of article 5* of their 1957 Agreement.<sup>320</sup>

*Article 5*

It shall be prohibited to ret flax and hemp in the frontier waters and to discharge untreated waste waters and other substances harmful to aquatic wildlife, irrespective of the manner in which and the distance from which such substances reach the frontier waters. A Contracting Party failing to respect this provision shall make compensation for any damage caused.

448. The 1950 Treaty between Hungary and the USSR<sup>321</sup> provides for the liability of the contracting party which has caused extraterritorial injuries because

<sup>319</sup> See footnote 39 above.

<sup>320</sup> Agreement of 25 May 1957 between Yugoslavia and Hungary concerning fishing in frontier waters.

<sup>321</sup> See footnote 40 above.



of its failure to keep the frontier in proper order, as required in article 14 of the Treaty:

#### Article 14

1. The Contracting Parties shall ensure that the frontier waters are kept in proper order. They shall also take steps to prevent deliberate damage to the banks of frontier rivers.

2. Where one Contracting Party occasions material damage to the other Contracting Party by failing to comply with the provisions of paragraph 1 of this article, compensation for such damage shall be paid by the Party responsible therefor.

449. The Netherlands and the Federal Republic of Germany recognize State liability for injuries caused in violation of certain provisions of their 1960 frontier Treaty.<sup>322</sup> These provisions primarily refer to *procedural steps* which should be taken when an *objection is raised* regarding certain activities by the other contracting party. The importance attached to the procedural aspects of evaluating an activity involving extraterritorial injuries is quite explicit in this Treaty. It appears that a unilateral decision to carry out an activity likely to cause extraterritorial injuries may lead to a greater degree of liability for damage than in the case of activities preceded by some recommended procedural steps such as consultation, etc. Of course, consultation and other procedural steps should be taken only when there is an objection to the undertaking of a particular activity. Article 63 of the Treaty reads:

#### Article 63

1. If one of the Contracting Parties, notwithstanding the objections raised by the other Party under the terms of article 61, acts in violation of its obligations under this chapter or arising under any of the special agreements to be concluded as provided in article 59, thereby causing damage within the territory of the other Contracting Party, it shall be liable for damages.

2. Liability for damages shall arise in respect only of such damage as was sustained after the objections were raised.

450. State liability is also provided for in bilateral agreements concerning extraterritorial injuries to one contracting party resulting from any kind of activities. For example, the 1964 Agreement between Finland and the USSR<sup>323</sup> provides, in article 5, that the contracting party which causes injury in the territory of the other party through activities in its own territory shall be liable and shall pay compensation:

#### Article 5

Where the execution of certain measures by one Contracting Party causes loss or damage in the territory of the other Contracting Party, the Contracting Party permitting such measures in its territory shall be liable to make reparation to the Party suffering the loss or damage. Each Contracting Party shall ensure that reparation for the loss or damage is made to nationals, organizations and institutions of its own country.

The Contracting Parties may agree separately to make reparation for any loss or damage caused by the measures referred to in this article by granting the Party suffering the loss or damage certain privileges in the watercourses of the other Party.

451. The 1973 Treaty between Argentina and Uruguay concerning the La Plata River<sup>324</sup> contains an express provision concerning the general liability of the State

for extraterritorial damage. Each contracting party is liable for damage resulting from *polluting activities conducted in its territory and causing detriment to the other contracting party*. State liability is explicitly provided for in article 51 of the Treaty, regardless whether the polluting activity is *carried out by the State or by private entities*:

#### Article 51

Each Party shall be liable to the other for detriment suffered as a consequence of pollution caused by their operations, or by those of physical or corporate persons domiciled on their soil.

452. The 1951 Agreement between Finland and Norway concerning the transfer of the waters of a joint river (the Näätämo)<sup>325</sup> also contains provisions on State liability. However, a difference may be noted between this Agreement and those mentioned above. Whereas the latter deal with activities which either contracting party may undertake with or without prior consultation, and which may be harmful to the other party, this Agreement deals with certain *agreed changes* to be made in the course of a joint river which may be *injurious to one of the parties*. Consequently the party which benefits more from such changes agrees to compensate the other party for the injuries it may sustain. Article 2, paragraph (c), of the Agreement provides:

#### Article 2

(c) The Government of Norway shall compensate the Government of Finland for any loss of water power which may be caused as a result of this Agreement and for the cost of the clearing operations referred to under (b) above, by an overall payment which has been fixed at 15,000 Norwegian kronor.

453. The concept of State liability as expressed in the preceding agreement is also to be found in an agreement concluded in 1959 between the USSR and Finland concerning the regulation of Lake Inari.<sup>326</sup> Article 1 provides for the *payment of a lump sum* of 75 million Finnish marks for any loss or damage that might be caused to land, waters, structures or other property belonging to the State, to communes or to private persons of Finland as a result of the implementation of certain agreed activities. Consequently, and in consideration of the payment of the lump sum, the Soviet Union is *exonerated from all responsibility* towards Finland and its nationals arising out of these activities:

#### Article 1

In consideration of such loss and damage as have been or may be caused to the lands, waters, structures or other property of any kind belonging to the State, communes and private persons and bodies of Finland as a result of the regulation of Lake Inari under the Agreement of 24 April 1947 and the Agreement concluded this day, and as payment for the works which have been and are to be carried out by the Finnish Ministry under the Regulations referred to in article 2 of the said Agreements, the Government of the Soviet Union has paid to the Government of Finland a lump sum of seventy-five million (75,000,000) Finnish markkaa.

<sup>322</sup> See footnote 227 above.

<sup>323</sup> Additional Protocol of 29 April 1959 between the USSR and Finland concerning compensation for loss and damage and for the works to be carried out by Finland in connection with the implementation of the Agreement of 29 April 1959 between the Government of the Union of Soviet Socialist Republics, the Government of Finland and the Government of Norway concerning the regulation of Lake Inari by means of the Kaitakoski hydroelectric power station and dam.

<sup>324</sup> See footnote 100 above.

<sup>325</sup> See footnote 126 above.

<sup>326</sup> Treaty of 19 November 1973 between Argentina and Uruguay concerning the La Plata River and its maritime limits.

The Government of the Soviet Union is consequently exonerated of all responsibility of the State, communes, individuals and corporate bodies of Finland for the loss and damage referred to in the first paragraph of this article and for the works which have been and are to be carried out by the Finnish Ministry under the Regulations referred to in article 2 of the said Agreements. The Finnish Ministry assumes all such responsibility to the said authorities, persons and bodies.

454. A different form of State liability may be observed in the 1959 Convention between France and Spain,<sup>327</sup> which provides for mutual assistance between the two contracting parties in case of fire. The Convention exonerates the party that was called upon for assistance from liability for any damage that may be caused to third parties; *liability for such damage lies with the party requesting the assistance*. As for the damage that may be caused to third parties by the fire services while on their way to or from the place where they are employed, the authorities in whose territory the injury has occurred will be liable for damage. Moreover, if the emergency assistance causes injury or death to the service personnel, the party to which the personnel belong shall waive any claim against the other party. Article VI of the Convention reads:

*Article VI. Payment of damages and compensation consequent upon accidents*

1. In the event of the death of or injury to emergency personnel, the Party to which the personnel in question belong shall waive any claim against the other Party.

2. If the emergency services called in to assist cause damage to third parties at the place where they are employed, such damage being attributable to the emergency operations, the damage shall be the responsibility of the Party which requested the assistance, even if it results from a faulty action or technical error.

3. If the emergency services called in to assist cause damage to third parties while on the way to or from the place where they are employed, such damage shall be the responsibility of the authorities in whose territory it was caused.

455. Similarly, article 5 of the 1967 Agreement between the Federal Republic of Germany and Austria regarding the Salzburg airport<sup>328</sup> provides for the liability of the Federal Republic of Germany if injury to third parties occurs in its territory as a result of unlawful conduct by Austrian airport officials. Austria is of course obliged to *compensate* the Federal Republic of Germany for its *discharge of liability* arising from the claim. This article does not apply to injuries that may be sustained by Austrian nationals. It reads:

*Article 5*

1. In the event of damage to persons, property or interests resulting in the territory of the Federal Republic of Germany from the effects of airport traffic or of operation of the Salzburg airport and culpably caused, through unlawful conduct, by agents of the Republic of Austria in connection with their official activities, the Federal Republic of Germany shall be liable in accordance with the laws and regulations governing its liability in respect of its own agents.

2. The Federal Republic of Germany shall, if a claim is made against it pursuant to paragraph 1, notify the Republic of Austria accordingly without delay, and shall also inform it if the claim is brought before a court.

3. The Republic of Austria shall be obligated, to the extent that its laws and regulations permit, to make available to the Federal Republic

of Germany such information and evidence obtainable by it as may be helpful in dealing with the damage claim.

4. The Federal Republic of Germany shall notify the Republic of Austria of the settlement of the claim; copies of the decision, agreement or other disposition resulting in a settlement shall be attached.

5. The Republic of Austria shall compensate the Federal Republic of Germany for its discharge of the liabilities arising from paragraph (1).

6. This article shall not apply where the damage is sustained by an Austrian national.

456. The Agreement also provides that, if the Federal Republic of Germany takes measures in connection with the airport that give rise to liability on the part of the airport operator under German law, the Federal Republic shall accept the liability. However, Austria must *reimburse* the Government of the Federal Republic of Germany for all necessary costs and damages resulting from those measures. Article 4 reads in part:

*Article 4*

1. Where measures taken by German authorities in connection with construction and operation of the Salzburg airport give rise under German law to liability for compensation on the part of the airport operator, such liability shall be assumed by the Federal Republic of Germany.

2. The Republic of Austria shall reimburse the Federal Republic of Germany, the State of Bavaria and its municipal corporations for all necessary costs and all damage incurred in connection with construction and operation of the airport, especially costs arising under paragraph 1 and other costs incurred in meeting third-party claims.

...

457. In a number of agreements with Ireland, Italy and the Netherlands, the United States of America accepts liability for certain injuries which may arise out of the use of the ports of those States by the United States nuclear ship *Savannah*. The United States further accepts liability for injuries arising from the operation of the *Savannah* by a private company. In the 1964 Agreement between the United States and Ireland,<sup>329</sup> paragraphs 1 and 4 of note I provide:

1. The United States Government shall provide compensation for all loss, damage, death or injury in Ireland (including Irish territorial seas) arising out of or resulting from the operation of N.S. *Savannah* to the extent that the United States Government, the United States Maritime Administration or a person indemnified under the Indemnification Agreement is liable for public liability in respect of such loss, damage, death or injury.

...

4. The United States Government being liable in the conditions specified in paragraph (1) of this Agreement, shall not pursue any right of recourse against any person who might otherwise be liable for such loss, damage, death or injury.

458. A similar agreement concluded between the United States of America and Italy in 1964<sup>330</sup> provides:

*Article VIII. Liability for damage*

Within the limitations of liability set by United States Public Law 85-256 (annex "A"), as amended by 85-602 (annex "B"), in any legal action or proceeding brought *in personam* against the United States in an Italian court, the United States Government will pay compensation for any responsibility which an Italian court may find, according to Italian law, for any damage to people or goods deriving from a nuclear incident in connection with, arising out of or resulting from the operation, repair, maintenance or use of the ship, in which the N.S. *Savannah* may be involved within Italian territorial waters, or outside of them on a voyage to or from Italian ports if damage is caused in Italy or on ships of Italian registry.

<sup>327</sup> Convention of 14 July 1959 between France and Spain on mutual assistance between French and Spanish fire and emergency services, and Additional Agreement of 8 February 1973 to that Convention.

<sup>328</sup> See footnote 18 above.

<sup>329</sup> See footnote 21 above.

<sup>330</sup> See footnote 20 above.

Subject to the \$500 million limitation in such public laws, the United States Government agrees not to interpose the defence of sovereign immunity and to submit to the jurisdiction of the Italian courts and not to invoke the provisions of Italian laws or any other law relating to the limitation of shipowners' liability.

459. In an exchange of notes of 1965 constituting an agreement between the United States of America and Italy concerning liability during the private operation of the N.S. *Savannah*,<sup>331</sup> the United States also assumes liability. The relevant paragraphs of the agreement read:

... concerning visits of the N.S. *Savannah* to Italy and ... recent conversations with respect to the situation arising from the operation of the N.S. *Savannah* by a private company,

... [the United States proposes:]

Within the limitation of liability set by United States Public Law 85-256 (Annex A), as amended by 85-602 (Annex B) in any legal action or proceeding brought *in personam* against the operator to the N.S. *Savannah* in an Italian court, the United States Government will provide compensation by way of indemnity for any legal liability which an Italian court may find for any damage to people or goods deriving from a nuclear incident in connection with, arising out of or resulting from the operation, repair, maintenance or use of the N.S. *Savannah*, in which the N.S. *Savannah* may be involved within Italian territorial waters, or outside of them on a voyage to or from Italian ports if damage is caused in Italy or on ships of Italian registry. . . .

460. Similarly, articles 1 and 3 of the 1963 Agreement between the Netherlands and the United States of America on liability for damage caused by the N.S. *Savannah*<sup>332</sup> provide:

#### Article 1

The United States shall provide compensation for damage which arises out of or results from a nuclear incident in connection with the design, development, construction, operation, repair, maintenance or use of the N.S. *Savannah* provided, and to the extent, that any competent court of the Netherlands or a Commission to be established under Netherlands law, determines the United States to be liable for public liability. The principles of law which shall govern the liability of the United States for any such damage shall be those in existence at the time of the occurrence of the said nuclear incident.

#### Article 3

The United States shall pursue no rights of recourse against any person who on account of any act or omission committed on Netherlands territory would be liable for damage as described in article 1.

461. The 1963 Operational Agreement on arrangements for a visit of the N.S. *Savannah* to the Netherlands<sup>333</sup> provides in article 26 that, in the event of the ship running ashore, running aground or sinking in Netherlands waters, the Netherlands may take the necessary measures at the owner's expense:

#### Article 26

In the event of the ship running ashore, running aground or sinking in Netherlands waters the competent authorities under Netherlands law may take the necessary action at the owners' expense. The United States Government shall offer all possible assistance and in particular shall make available any equipment which might prove necessary to expedite required operations.

462. In 1970, the Federal Republic of Germany concluded a similar treaty with Liberia concerning its nuclear ship *Otto Hahn*.<sup>334</sup> Article 16 of the Treaty provides that the Federal Republic of Germany shall ensure

the payment of damages caused by the operator of the ship:

#### Article 16

1. The Federal Republic of Germany shall ensure the payment of claims for compensation for nuclear damage established under this Treaty against the operator of the ship by providing the necessary funds up to a maximum amount of DM 400 million (four hundred million). Funds shall be provided only to the extent that the yield of the insurance or other financial security is inadequate to satisfy such claims.

2. The Government of the Federal Republic of Germany shall, upon request of the Liberian Government, make the amount available three months after the judgment against the operator has become final.

#### (c) Judicial decisions and State practice other than agreements

463. Judicial decisions, official correspondence and inter-State relations show that States are responsible both for the private activities conducted within their territorial jurisdiction and for the activities they themselves conduct within or beyond the limits of their territorial control. Even when States have apparently refused to accept liability as a legal principle characterizing the consequences of their actions, they have nevertheless acted as though they accepted such liability, whatever the terms used to describe their position. Most of the cases and incidents examined in this section relate to activities normally conducted by States.

464. In its claim against the USSR in 1979 following the accidental crash of the nuclear-powered Soviet satellite, *Cosmos 954*, on Canadian territory, Canada sought to impose "absolute liability" on the Soviet Union by reason of the damage caused by the accident. In arguing the liability of the Soviet Union, Canada invoked not only "relevant international agreements", including the 1972 Convention on International Liability for Damage caused by Space Objects, but also "general principles of international law" (see para. 399 above).

465. In its judgment of 9 April 1949 in the *Corfu Channel* case (*merits*), the International Court of Justice placed liability upon Albania for failure to notify British shipping of a dangerous situation in its territorial waters, whether or not that situation had been caused by the Government of Albania. The Court found that it was the obligation of Albania to notify, for the benefit of shipping in general, the existence of mines in its territorial waters, not only by virtue of The Hague Convention No. VIII of 1907, but also of "certain general and well recognized principles, namely: elementary considerations of humanity, even more enacting in peace than in war, . . . , and every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States."<sup>335</sup> The Court found that no attempt had been made by Albania to prevent the disaster and it therefore held Albania "responsible under international law for the explosions . . . and for the damage and loss of human life . . .".<sup>336</sup>

466. In connection with the construction of a highway in Mexico, in proximity to the United States border, the

<sup>331</sup> *Ibid.*

<sup>332</sup> See footnote 22 above.

<sup>333</sup> *Ibid.*

<sup>334</sup> See footnote 19 above.

<sup>335</sup> *I.C.J. Reports 1949*, p. 22.

<sup>336</sup> *Ibid.*, p. 36.

United States Government, considering that, notwithstanding the technical changes that had been made in the project at its request, the highway did not offer sufficient guarantees for the security of property situated in United States territory (see paras. 163 and 292 above), reserved its rights in the event of damage resulting from the construction of the highway. In a note addressed on 29 July 1959 to the Mexican Minister of Foreign Relations, the United States Ambassador to Mexico concluded:

In view of the foregoing, I am instructed to reserve all the rights that the United States may have under international law in the event that damage in the United States results from the construction of the highway.<sup>337</sup>

467. In the case of the *Rose Street Canal* (see para. 248 above), both the United States and Mexico reserved the right to invoke the responsibility of the State whose construction activities might cause damage in the territory of the other State.

468. In the correspondence between Canada and the United States regarding the United States *Cannikin* underground nuclear tests on Amchitka (see para. 240 above), Canada reserved its rights to compensation in the event of damage.

469. The series of United States nuclear tests on *Eniwetok Atoll* on 1 March 1954 caused injuries extending far beyond the danger area: they injured Japanese fishermen on the high seas and contaminated a great part of the atmosphere and a considerable quantity of fish, thus seriously disrupting the Japanese fish market. Japan demanded compensation. In a note dated 4 January 1955, the United States Government, completely avoiding any reference to legal liability, agreed to pay compensation for injury caused by the tests:

... The Government of the United States of America has made clear that it is prepared to make monetary compensation as an additional expression of its concern and regret over the injuries sustained ...

... the United States of America hereby tenders, *ex gratia*, to the Government of Japan, without reference to the question of legal liability, the sum of two million dollars for purposes of compensation for the injuries or damages sustained as a result of nuclear tests in the Marshall Islands in 1954.

... It is the understanding of the Government of the United States of America that the Government of Japan, in accepting the tendered sum of two million dollars, does so in full settlement of any and all claims\* against the United States of America or its agents, nationals or juridical entities for any and all injuries, losses or damages arising out of the said nuclear tests.<sup>338</sup>

470. In the case of the injuries sustained in 1954 by the inhabitants of the *Marshall Islands*, then a Trust Territory administered by the United States, the latter agreed to pay compensation. A report of the Committee on Interior and Insular Affairs of the United States Senate stated that, owing to an unexpected wind shift immediately following the nuclear explosion, the 82 inhabitants of the Rongelap Atoll had been exposed to heavy radioactive fallout. After describing the injuries to persons and property suffered by the inhabitants and the immediate and extensive medical assistance provided by the United States, the report concluded: "It

cannot be said, however, that the compensatory measures heretofore taken are fully adequate ...". The report disclosed that in February 1960 a complaint against the United States had been lodged with the high court of the Trust Territory with a view to obtaining \$8,500,000 as compensation for property damage, radiation sickness, burns, physical and mental agony, loss of consortium and medical expenses. The suit had been dismissed for lack of jurisdiction. The report indicated, however, that bill No. 1988 (on payment of compensation) presented in the House of Representatives was "needed to permit the United States to do justice\* to these people". On 22 August 1964, President Johnson signed into law an act under which the United States assumed "*compassionate responsibility\** to compensate inhabitants of the Rongelap Atoll, in the Trust Territory of the Pacific Islands, for radiation exposures sustained by them as a result of a thermonuclear detonation at Bikini Atoll in the Marshall Islands on March 1, 1954" and authorized \$950,000 to be paid in equal amounts to the affected inhabitants of Rongelap.<sup>339</sup> According to another report, in June 1982 the Reagan Administration was prepared to pay \$100 million to the Government of the Marshall Islands in settlement of all claims against the United States by islanders whose health and property had been affected by United States nuclear weapons tests in the Pacific between 1946 and 1963.<sup>340</sup> Reportedly, the islanders have so far filed suits in the United States in excess of \$4 billion.

471. The arbitral award rendered on 27 September 1968 in the *Gut Dam* case also bears on State liability. In 1874, a Canadian engineer had proposed to his Government the construction of a dam between Adams Island, in Canadian territory, and Les Galops Island, in the United States, in order to improve navigation on the St. Lawrence River. Following investigations and the exchange of many reports, as well as the adoption of legislation by the United States Congress approving the project, the Canadian Government undertook the construction of the dam in 1903. However, it soon became clear that the dam was too low to serve the desired purposes and, with United States permission, Canada increased its height. Between 1904 and 1951, several man-made changes affected the flow of water in the Great Lakes-St. Lawrence River basin. While the *dam itself was not altered* in any way, the level of the waters in the river and in nearby Lake Ontario increased. In 1951-1952, the waters reached unprecedented levels which, in combination with storms and other *natural* phenomena, resulted in extensive flooding and erosion, causing injuries on both the north and south shores of the lakes. In 1953, Canada removed the dam as part of the construction of the St. Lawrence Seaway, but the United States claims for damages allegedly resulting from the presence of the Gut Dam continued to fester for some years.<sup>341</sup>

472. The Lake Ontario Claims Tribunal, established in 1965 to resolve the matter, recognized the liability of

<sup>337</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 6, p. 262.

<sup>338</sup> *The Department of State Bulletin*, Washington, D.C., vol. 32, No. 812, 17 January 1955, pp. 90-91.

<sup>339</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 4, p. 567.

<sup>340</sup> *International Herald Tribune*, 15 June 1982, p. 5, col. 2.

<sup>341</sup> See the report of the United States agent before the Lake Ontario Claims Tribunals, "Canada-United States Settlement of Gut Dam Claims (September 27, 1968)", *International Legal Materials* (Washington, D.C.), vol. VIII, 1969, pp. 128-138.

Canada, *without* finding any fault or negligence on the part of Canada. The Tribunal, of course, relied a great deal on the terms of the second condition stipulated in the instrument signed on 18 August 1903 and 10 October 1904 whereby the United States Secretary of War had approved construction of the dam, as well as on Canada's unilateral acceptance of liability. Furthermore, the Tribunal found Canada liable not only towards the inhabitants of Les Galops in connection with the injuries caused by the dam but also towards all United States citizens. Such responsibility was moreover found not to be limited in time to some initial testing period. The Tribunal concluded that the only questions remaining to be settled were whether the Gut Dam had caused the damage for which claims had been filed and the amount of compensation.

473. Other transboundary incidents have occurred owing to activities carried out by Governments within their territories, with effects on a neighbouring State, but they have not given rise to official demands for compensation. These incidents have of course been minor and of an accidental nature.

474. In 1949, Austria made a formal protest to the Hungarian Government for installing mines in its territory close to the Austrian border, and demanded their removal, but it did not claim compensation for injuries caused by the explosion of some of the mines on its territory. Hungary had apparently laid the mines to prevent illegal passage across the border. Austria was concerned that during a flood the mines might be washed into Austrian territory and endanger the lives of its nationals resident near the border. These protests, however, did not prevent Hungary from maintaining its minefields. In 1966, a Hungarian mine exploded in Austrian territory, causing extensive damage. The Austrian Ambassador lodged a strong protest with the Hungarian Foreign Ministry, accusing Hungary of violating the *uncontested international legal principle according to which measures taken in the territory of one State must not endanger the lives, health and property of citizens of another State*. Following a second accident, occurring shortly after, Austria again protested to Hungary, stating that the absence of a *public* commitment by Hungary to take all measures to prevent such accidents in the future was totally inconsistent with the principle of "good neighbourliness". Hungary subsequently removed or relocated all minefields away from the Austrian border.<sup>342</sup>

475. In October 1968, during a shooting exercise, a Swiss artillery unit erroneously fired four shells into the territory of Liechtenstein. The facts concerning this incident are difficult to ascertain. However, the Swiss Government, in a note to the Government of Liechtenstein, expressed regret for the involuntary violation of the frontier. The Swiss Government stated that it was prepared to compensate all damage caused and that it would take all necessary measures to prevent a recurrence of such incidents.<sup>343</sup>

476. Judicial decisions and official correspondence demonstrate that States have agreed to assume liability

for the injurious impact of activities by private entities operating within their territory. The legal basis for such State liability appears to derive from the principle of territorial sovereignty, a concept investing States with exclusive rights within certain portions of the globe. This concept of the function of territorial sovereignty was emphasized in the *Island of Palmas* case.<sup>344</sup> The arbitrator stated that territorial sovereignty

... cannot limit itself to its negative side, i.e. to excluding the activities of other States; for it serves to divide between nations the space upon which human activities are employed, in order to assure them at all points the minimum of protection of which international law is the guardian.<sup>345</sup>

This concept was later formulated in a more realistic way, namely, that actual physical control is the sound basis for State liability and responsibility. The International Court of Justice, in its advisory opinion of 21 June 1971 concerning Namibia, stated:

... Physical control of a territory, and not sovereignty or legitimacy of title, is the basis of State liability for acts affecting other States.<sup>346</sup>

From this perspective, the liability of States for extra-territorial damage caused by private persons under their control is an important issue to be examined in the context of this study. The following are examples of State practice touching upon this source of State liability.

477. In 1948, a munitions factory in Arcisate, in Italy, near the Swiss frontier, exploded and caused varying degrees of damage in several Swiss communes. The Swiss Government demanded reparation from the Italian Government for the damage sustained; it invoked the principle of good neighbourliness and argued that Italy was liable since it *tolerated the existence of an explosives factory*, with all its attendant hazards, in the immediate vicinity of an international border.<sup>347</sup>

478. In 1956, the river Mura, forming the international boundary between Yugoslavia and Austria, was extensively polluted by the sediments and mud which several Austrian hydroelectric facilities had released by partially draining their reservoirs in order to forestall major flooding. Yugoslavia claimed compensation for the economic loss incurred by two paper mills and for damage to fisheries. In 1959, the two States agreed on a settlement, pursuant to which Austria paid monetary compensation and delivered a certain quantity of paper to Yugoslavia.<sup>348</sup> Although the settlement was reached in the framework of the Permanent Austro-Yugoslavian Commission for the River Mura, this is a case in which the injured State invoked the direct liability of the controlling State and the controlling State accepted the claim to pay compensation.

479. In 1971, the Liberian tanker *Juliana* ran aground and split apart off Niigata, on the west coast of the

<sup>344</sup> *Netherlands v. United States of America*, United Nations, *Reports of International Arbitral Awards*, vol. II, p. 829.

<sup>345</sup> *Ibid.*, p. 839.

<sup>346</sup> *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.

<sup>347</sup> Guggenheim, *loc. cit.* (footnote 191 above), p. 169.

<sup>348</sup> See Handl, "State liability for accidental transnational environmental damage by private persons", *American Journal of International Law*, vol. 74, 1980, pp. 545-546; *The Times*, London, 2 December 1971, p. 8, col. 1.

<sup>342</sup> See Handl, *loc. cit.* (footnote 71 above), pp. 23-24.

<sup>343</sup> *Annuaire suisse de droit international, 1969-1970*, Zurich, vol. 26, p. 158.

Japanese island of Honshu. The oil of the tanker washed ashore and extensively damaged local fisheries. The Liberian Government (the flag State) offered 200 million yen to the fishermen for damage, which they accepted.<sup>349</sup> In this affair, the Liberian Government accepted the claims for damage caused by the act of a private person. It seems that no allegations of wrongdoing on the part of Liberia were made at an official diplomatic level.

480. Following the accidental spill of 12,000 gallons of crude oil into the sea at *Cherry Point*, in the State of Washington, and the resultant pollution of Canadian beaches (see para. 436 above), the Canadian Government addressed a note to the United States Department of State in which it expressed its grave concern about this "ominous incident" and noted that "the Government wishes to obtain firm assurances that full compensation for all damages, as well as the cost of clean-up operations, will be paid by those legally responsible".<sup>350</sup> Reviewing the legal implications of the incident before the Canadian Parliament, the Canadian Secretary of State for External Affairs stated:

We are especially concerned to ensure observance of the principle established in the 1938 *Trail Smelter* arbitration between Canada and the United States. This has established that one country may not permit the use of its territory in such a manner as to cause injury to the territory of another and shall be responsible to pay compensation for any injury so suffered. Canada accepted this responsibility in the *Trail Smelter* case and we would expect that the same principle would be implemented in the present situation. Indeed, this principle has already received acceptance by a considerable number of States and hopefully it will be adopted at the Stockholm Conference as a fundamental rule of international environmental law.<sup>351</sup>

481. Canada, referring to the precedent of the *Trail Smelter* case, claimed that the United States was responsible for the extraterritorial damage caused by acts occurring under its territorial control, regardless whether the United States was at fault. The final resolution of the dispute did not involve the legal principle invoked by Canada; the private company responsible for the pollution offered to pay the costs of the clean-up operations; the official United States response to the Canadian claim remains unclear.

482. In 1973, a major contamination occurred in the Swiss canton of Bale-Ville owing to the production of insecticides by a French chemical factory across the border. The contamination caused damage to the agriculture and environment of that canton and destroyed some 10,000 litres of milk production per month.<sup>352</sup> The facts about the case and the diplomatic negotiations that followed are difficult to ascertain. The Swiss Government apparently intervened and negotiated with the French authorities in order to halt the pollution and obtain compensation for the damage. The reaction of the French authorities is unclear; however, it appears that persons injured brought charges in French courts.

483. During negotiations between the United States and Canada regarding a plan for oil prospection in the

*Beaufort Sea*, near the Alaskan border, the Canadian Government undertook to guarantee payment of any damage that might be caused in the United States by the activities of the private corporation that was to undertake the prospection (see para. 357 above). It should be noted that, although the private corporation was to furnish a bond covering compensation for potential victims in the United States, the Canadian Government accepted liability on a subsidiary basis for payment of the cost of transfrontier damage should the bonding arrangement prove to be inadequate.

#### D. Exoneration from liability

484. In interstate relations as under domestic law, there are certain circumstances in which liability may be ruled out. The principles governing exoneration from liability in interstate relations are similar to those applying in domestic law, such as prescription, contributory negligence, war, civil insurrection, natural disasters of an exceptional character, etc.

##### (a) Multilateral agreements

485. In certain circumstances, the liability of the operator or of the State may be precluded. Some multilateral conventions provide for such exoneration. The typical exoneration is that which results from *prescription*. Article 21 of the 1952 Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface provides that actions under the Convention are limited to two years from the date of the incident. Any suspension or interruption of these two years is determined by the law of the court where the action is brought. Nevertheless, the maximum time for bringing an action may not extend beyond three years from the date of the accident. The article reads:

##### Article 21

1. Actions under this Convention shall be subject to a period of limitation of two years from the date of the incident which caused the damage.

2. The grounds for suspension or interruption of the period referred to in paragraph 1 of this article shall be determined by the law of the court trying the action; but in any case the right to institute an action shall be extinguished on the expiration of three years from the date of the incident which caused the damage.

486. Articles 16 and 17 of the 1966 Additional Convention to the International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 25 February 1961, relating to the liability of the railway for death of and personal injury to passengers, provide for a period of time after which a right of action will be extinguished. These articles read:

##### Article 16. Extinction of rights of action

1. A claimant shall lose his right of action if he does not give notice of the accident to a passenger to one of the railways to which a claim may be presented in accordance with article 13 within three months of his becoming aware of the damage.

When notice of the accident is given orally by the claimant, confirmation of this oral notice must be delivered to the claimant by the railway to which the accident has been notified.

2. Nevertheless the right of action shall not be extinguished:

(a) if, within the period of time provided for in paragraph 1, the claimant has made a claim to one of the railways designated in article 13 (1);

<sup>349</sup> *The Times*, London, 1 October 1974; *Revue générale de droit international public*, Paris, vol. 80, 1975, p. 842.

<sup>350</sup> *Loc. cit.* (footnote 318 above).

<sup>351</sup> *Ibid.*, p. 334.

<sup>352</sup> See *Annuaire suisse de droit international*, 1974, Zurich, vol. 30, p. 147.

(b) if the claimant proves that the accident was caused by the wrongful act or neglect of the railway;

(c) if notice of the accident has not been given, or has been given late, as a result of circumstances for which the claimant is not responsible;

(d) if during the period of time specified in paragraph (1), the railway responsible—or one of the two railways if in accordance with article 2 (6) two railways are responsible—knows of the accident to the passenger through other means.

#### *Article 17. Limitation of actions*

1. The periods of limitation for actions for damages brought under this Convention shall be:

(a) in the case of the passenger who has sustained an accident, three years from the day after the accident;

(b) in the case of other claimants, three years from the day after the death of the passenger, or five years from the day after the accident, whichever is the earlier.

2. When a claim is made to the railway in accordance with article 13, the three periods of limitation provided for in paragraph 1 shall be suspended until such date as the railway rejects the claim by notification in writing, and returns the documents attached thereto. If part of the claim is admitted, the period of limitation shall start to run again only in respect of that part of the claim still in dispute. The burden of proof of the receipt of the claim or of the reply and of the return of the documents, shall rest with the party relying upon these facts.

The running of the period of limitation shall not be suspended by further claims having the same object.

3. A right of action which has become barred by lapse of time may not be exercised even by way of counterclaim or set-off.

4. Subject to the foregoing provisions, the limitation of actions shall be governed by national law.

487. The Convention further exonerates the railway from liability if the accident has been caused by circumstances not connected with the operation of the railway and if the railway, in spite of having taken the care required, could not have avoided it. Paragraph 2 of article 2 of the Convention reads:

#### *Article 2. Extent of liability*

...

2. The railway shall be relieved of liability if the accident has been caused by circumstances not connected with the operation of the railway and which the railway, in spite of having taken the care required in the particular circumstances of the case, could not avoid and the consequences of which it was unable to prevent.

...

488. The 1962 Convention on the Liability of Operators of Nuclear Ships provides for a ten-year period of prescription from the date of the nuclear incident. The domestic law of the licensing State may provide for a longer period. Article V of the Convention reads:

#### *Article V*

1. Rights of compensation under this Convention shall be extinguished if an action is not brought within ten years from the date of the nuclear incident. If, however, under the law of the licensing State the liability of the operator is covered by insurance or other financial security or State indemnification for a period longer than ten years, the applicable national law may provide that rights of compensation against the operator shall only be extinguished after a period which may be longer than ten years but shall not be longer than the period for which his liability is so covered under the law of the licensing State. However, such extension of the extinction period shall in no case affect the right of compensation under this Convention of any person who has brought an action for loss of life or personal injury against the operator before the expiry of the aforesaid period of ten years.

2. Where nuclear damage is caused by nuclear fuel, radioactive products or waste which were stolen, lost, jettisoned, or abandoned,

the period established under paragraph 1 of this article shall be computed from the date of the nuclear incident causing the nuclear damage, but the period shall in no case exceed a period of twenty years from the date of the theft, loss, jettison or abandonment.

3. The applicable national law may establish a period of extinction or prescription of not less than three years from the date on which the person who claims to have suffered nuclear damage had knowledge or ought reasonably to have had knowledge of the damage and of the person responsible for the damage, provided that the period established under paragraphs 1 and 2 of this article shall not be exceeded.

4. Any person who claims to have suffered nuclear damage and who has brought an action for compensation within the period applicable under this article may amend his claim to take into account any aggravation of the damage, even after the expiry of that period, provided that final judgment has not been entered.

489. The Convention also provides for exoneration from liability of the operators of a nuclear ship if the damage was due to an act of war, hostilities, civil war or insurrection. Article VIII of the Convention reads:

#### *Article VIII*

No liability under this Convention shall attach to an operator in respect to nuclear damage caused by a nuclear incident directly due to an act of war, hostilities, civil war or insurrection.

490. A ten-year period of prescription is also provided for in the 1963 Vienna Convention on Civil Liability for Nuclear Damage, article VI of which reads:

#### *Article VI*

1. Rights of compensation under this Convention shall be extinguished if an action is not brought within ten years from the date of the nuclear incident. If, however, under the law of the Installation State the liability of the operator is covered by insurance or other financial security or by State funds for a period longer than ten years, the law of the competent court may provide that rights of compensation against the operator shall only be extinguished after a period which may be longer than ten years, but shall not be longer than the period for which his liability is so covered under the law of the Installation State. Such extension of the extinction period shall in no case affect rights of compensation under this Convention of any person who has brought an action for loss of life or personal injury against the operator before the expiry of the aforesaid period of ten years.

2. Where nuclear damage is caused by a nuclear incident involving nuclear material which at the time of the nuclear incident was stolen, lost, jettisoned or abandoned, the period established pursuant to paragraph 1 of this article shall be computed from the date of that nuclear incident, but the period shall in no case exceed a period of twenty years from the date of the theft, loss, jettison or abandonment.

3. The law of the competent court may establish a period of extinction or prescription of not less than three years from the date on which the person suffering nuclear damage had knowledge or should have had knowledge of the damage and of the operator liable for the damage, provided that the period established pursuant to paragraphs 1 and 2 of this article shall not be exceeded.

...

491. The same period of prescription is provided for in the 1960 Convention on Third Party Liability in the Field of Nuclear Energy, articles 8 and 9 of which read:

#### *Article 8*

(a) The right of compensation under this Convention shall be extinguished if an action is not brought within ten years from the date of the nuclear incident. National legislation may, however, establish a period longer than ten years if measures have been taken by the Contracting Party in whose territory the nuclear installation of the operator liable is situated to cover the liability of that operator in respect of any actions for compensation begun after the expiry of the period of ten years and during such longer period: provided that such extension of the extinction period shall in no case affect the right of compensation under this Convention of any person who has brought an action in respect of loss of life or personal injury against the operator before the expiry of the period of ten years.



(b) In the case of damage caused by a nuclear incident involving nuclear fuel or radioactive products or waste which, at the time of the incident have been stolen, lost, jettisoned or abandoned and have not yet been recovered, the period established pursuant to paragraph (a) of this article shall be computed from the date of that nuclear incident, but the period shall in no case exceed twenty years from the date of the theft, loss, jettison or abandonment.

(c) National legislation may establish a period of not less than two years for the extinction of the right or as a period of limitation either from the date at which the person suffering damage has knowledge or from the date at which he ought reasonably to have known of both the damage and the operator liable: provided that the period established pursuant to paragraphs (a) and (b) of this article shall not be exceeded.

(d) Where the provisions of article 13 (c) (ii) are applicable, the right of compensation shall not, however, be extinguished if, within the time provided for in paragraph (a) of this article,

(i) prior to the determination by the Tribunal referred to in article 17, an action has been brought before any of the courts from which the Tribunal can choose; if the Tribunal determines that the competent court is a court other than that before which such action has already been brought, it may fix a date by which such action has to be brought before the competent court so determined; or

(ii) a request has been made to a Contracting Party concerned to initiate a determination by the Tribunal of the competent court pursuant to article 13 (c) (ii) and an action is brought subsequent to such determination within such time as may be fixed by the Tribunal.

(e) Unless national law provides to the contrary, any person suffering damage caused by a nuclear incident who has brought an action for compensation within the period provided for in this article may amend his claim in respect of any aggravation of the damage after the expiry of such period provided that final judgment has not been entered by the competent court.

#### Article 9

The operator shall not be liable for damage caused by a nuclear incident directly due to an act of armed conflict, hostilities, civil war, insurrection or, except in so far as the legislation of the Contracting Party in whose territory his nuclear installation is situated may provide to the contrary, a grave natural disaster of an exceptional character.

492. The 1972 Convention on International Liability for Damage Caused by Space Objects provides for a one-year limit for bringing actions for damages. The one year runs from the occurrence of the damage or from the identification of the launching State which is liable. This period, however, shall not exceed one year following the date by which the State could *reasonably* be expected to have learned of the facts. Article X of the Convention reads:

#### Article X

1. A claim for compensation for damage may be presented to a launching State not later than one year following the date of the occurrence of the damage or the identification of the launching State which is liable.

2. If, however, a State does not know of the occurrence of the damage or has not been able to identify the launching State which is liable, it may present a claim within one year following the date on which it learned of the aforementioned facts; however, this period shall in no event exceed one year following the date on which the State could reasonably be expected to have learned of the facts through the exercise of due diligence.

3. The time-limits specified in paragraphs 1 and 2 of this article shall apply even if the full extent of the damage may not be known. In this event, however, the claimant State shall be entitled to revise the claim and submit additional documentation after the expiration of such time-limits until one year after the full extent of the damage is known.

493. An action for damages may be brought within three years from the date of the occurrence of the damage under the 1969 International Convention on

Civil Liability for Oil Pollution Damage. No action may be brought after six years from the date of the incident which caused damage. Article VIII of the Convention reads:

#### Article VIII

Rights of compensation under this Convention shall be extinguished unless an action is brought thereunder within three years from the date when the damage occurred. However, in no case shall an action be brought after six years from the date of the incident which caused the damage. Where this incident consists of a series of occurrences, the six years' period shall run from the date of the first such occurrence.

494. The provisions of this Convention do not apply to warships or other ships owned or operated only for governmental and non-commercial service. Paragraph 1 of article XI reads:

#### Article XI

1. The provisions of this Convention shall not apply to warships or other ships owned or operated by a State and used, for the time being, only on government non-commercial service.

...

495. An identical period of prescription is stipulated in article 6 of the 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage:

#### Article 6

1. Rights to compensation under article 4 or indemnification under article 5 shall be extinguished unless an action is brought thereunder or a notification has been made pursuant to article 7, paragraph 6, within three years from the date when the damage occurred. However, in no case shall an action be brought after six years from the date of the incident which caused the damage.

2. Notwithstanding paragraph 1, the right of the owner or his guarantor to seek indemnification from the Fund pursuant to article 5, paragraph 1, shall in no case be extinguished before the expiry of a period of six months as from the date on which the owner or his guarantor acquired knowledge of the bringing of an action against him under the Liability Convention.

496. *Contributory negligence* by the injured party is also held to extinguish the total or partial liability of the operator or the acting State in some multilateral conventions. Under the 1963 Vienna Convention on Civil Liability for Nuclear Damage, if the injury is caused as a result of the *gross negligence* of the claimant or an act or omission of such person with intent to cause damage, the competent court may, if its domestic law so provides, relieve the operator wholly or partly from his obligation to pay damage to such person. However, it is the operator who should prove the negligence of the claimant. Paragraph 2 of article IV of the Convention reads:

#### Article IV

...

2. If the operator proves that the nuclear damage resulted wholly or partly either from the gross negligence of the person suffering the damage or from an act or omission of such person done with intent to cause damage, the competent court may, if its law so provides, relieve the operator wholly or partly from his obligation to pay compensation in respect of the damage suffered by such person.

Paragraph 3 of the same article also provides for exonerated from liability if the injury is caused by a nuclear incident *directly* due to an act of *armed conflict, hostilities, civil war or insurrection*. Thus, unless the domestic law of the installation State provides to the contrary, the operator is not liable for nuclear damage

caused by a nuclear incident directly due to a *grave natural disaster of an exceptional character*:

3. (a) No liability under this Convention shall attach to an operator for nuclear damage caused by a nuclear incident directly due to an act of armed conflict, hostilities, civil war or insurrection.

(b) Except in so far as the law of the Installation State may provide to the contrary, the operator shall not be liable for nuclear damage caused by a nuclear incident directly due to a grave natural disaster of an exceptional character.

497. Under the 1969 International Convention on Civil Liability for Oil Pollution Damage, war, hostilities, civil war, insurrection or natural phenomena of an exceptional, inevitable and irresistible character are elements providing exoneration from liability, independently of negligence on the part of the claimant. Thus, when the damage is wholly caused by the negligence or other wrongful act of any Government or authorities responsible for the maintenance of lights or other navigational aids, the owner is exonerated from liability. Again the burden of proof is on the shipowner. Paragraphs 2 and 3 of article III of the Convention read:

#### Article III

...

2. No liability for pollution damage shall attach to the owner if he proves that the damage:

(a) resulted from an act of war, hostilities, civil war, insurrection or a natural phenomenon of an exceptional, inevitable and irresistible character, or

(b) was wholly caused by an act or omission done with intent to cause damage by a third party, or

(c) was wholly caused by the negligence or other wrongful act of any Government or other authority responsible for the maintenance of lights or other navigational aids in the exercise of that function.

3. If the owner proves that the pollution damage resulted wholly or partially either from an act or omission done with intent to cause damage by the person who suffered the damage or from the negligence of that person, the owner may be exonerated wholly or partially from his liability to such person.

...

498. Under the 1972 Convention on International Liability for Damage caused by Space Objects, if the *launching State proves* that the damage caused to the claimant State has been wholly or partly the result of *gross negligence* or of an act or omission of the claimant State or its nationals with intent to cause damage, it will be exonerated from liability. Paragraph 1 of article VI of the Convention reads:

#### Article VI

1. Subject to the provisions of paragraph 2 of this article, exoneration from absolute liability shall be granted to the extent that a launching State establishes that the damage has resulted either wholly or partially from gross negligence or from an act or omission done with intent to cause damage on the part of a claimant State or of natural or juridical persons it represents.

...

499. If a passenger suffers injuries due to his own *wrongful act or neglect or his behaviour not in conformity with the normal conduct of a passenger*, he will have no right of action against the railway. The railway in such cases will be relieved wholly or partially from liability. The 1966 Additional Convention to the International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 25 February 1961 relating to the liability of the railway for death of

and personal injury to passengers provides in article 2, paragraphs 3 and 4:

#### Article 2. Extent of liability

...

3. The railway shall be relieved wholly or partly of liability to the extent that the accident is due to the passenger's wrongful act or neglect or to behaviour on his part not in conformity with the normal conduct of passengers.

4. The railway shall be relieved of liability if the accident is due to a third party's behaviour which the railway, in spite of taking the care required in the particular circumstances of the case, could not avoid and the consequences of which it was unable to prevent.

...

500. Under the 1952 Convention on Damage caused by Foreign Aircraft to Third Parties on the Surface, if injury is caused *solely* through the *negligence* or other *wrongful act or omission of the injured person or his servants or agents*, the compensation shall be reduced to the extent to which the negligence or other wrongful act contributed to the damage. Article 6 of the Convention reads:

#### Article 6

1. Any person who would otherwise be liable under the provisions of this Convention shall not be liable for damage if he proves that the damage was caused solely through the negligence or other wrongful act or omission of the person who suffers the damage or of the latter's servants or agents. If the person liable proves that the damage was contributed to by the negligence or other wrongful act or omission of the person who suffers the damage, or of his servants or agents, the compensation shall be reduced to the extent to which such negligence or wrongful act or omission contributed to the damage. Nevertheless there shall be no such exoneration or reduction if, in the case of the negligence or other wrongful act or omission of a servant or agent, the person who suffers the damage proves that his servant or agent was acting outside the scope of his authority.

2. When an action is brought by one person to recover damages arising from the death or injury of another person, the negligence or other wrongful act or omission of such other person, or of his servants or agents, shall also have the effect provided in the preceding paragraph.

501. Under article 3, paragraph 3, and article 7, paragraph 5, of the draft convention on liability and compensation in connection with the carriage of noxious and hazardous substances by sea prepared by IMO in 1984, if the owner of the ship or the shipper of noxious substances proves that the damage resulted wholly or partially either from an act or omission done with the intent to cause damage by the person who suffered the damage or from the *negligence* of that person, the owner or the shipper *may* be exonerated wholly or partially from his liability to such person.

502. Article 3, paragraph 2, of the draft convention provides that no liability shall attach to the owner of the ship or the shipper *if he proves* that the damage resulted from an act of *war, hostilities, civil war, insurrection or a natural phenomenon of an exceptional and irresistible character*, or was *wholly* caused by an act or omission done with the intent to cause damage by a third party. It was proposed that another subparagraph should be included in the article in which exoneration from liability of the owner or the shipper would be provided for if the damage was wholly caused by *negligence* or other *wrongful act* of any Government or other authority responsible for the maintenance of lights or other navigational aids. There is, however, no indication in the draft convention whether or not the negligent State is liable for damage. Article 3 does not appear to pro-

vide for exoneration from liability for damage caused by *natural disaster*.

503. Article 139 of the 1982 United Nations Convention on the Law of the Sea also provides for exoneration from liability of the State for damage caused by any failure of a person whom the State has sponsored to comply with regulations on sea-bed mining, if the State party has taken all necessary and appropriate measures to secure effective compliance under article 153, paragraph 4, and annex III, article 4, paragraph 4. Paragraph 2 (b) of article 153 deals with joint activities undertaken by the Authority, or by natural or juridical persons, or by States parties to exploit sea-bed resources. Paragraph 4 of the same article provides for control by the Authority over activities undertaken by States parties, their enterprises or nationals. (For the text of article 139 of the Convention, see para. 444 above.)

504. Finally, article 3 of the 1976 Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources provides that the operator of an installation shall be exonerated from liability if he proves that the damage resulted from an act of *war, hostilities, civil war, insurrection, or a natural phenomenon of an exceptional, inevitable and irresistible character*; if the operator proves that the damage resulted wholly or partly either from an act or omission done with intent to cause damage by the person who suffered the damage or from the *negligence* of that person, he *may* be exonerated wholly or partly from his liability to such person. Furthermore, the operator of an abandoned well is not liable for pollution damage if he proves that the incident which caused the damage occurred more than five years after the date on which the well was abandoned under the authority and in accordance with the requirements of the controlling State. If the well has been abandoned in other circumstances, the liability of the operator is governed by the applicable national law. Article 3 of the Convention reads in part:

*Article 3*

...  
3. No liability for pollution damage shall attach to the operator if he proves that the damage resulted from an act of war, hostilities, civil war, insurrection, or a natural phenomenon of an exceptional, inevitable and irresistible character.

4. No liability for pollution damage shall attach to the operator of an abandoned well if he proves that the incident which caused the damage occurred more than five years after the date on which the well was abandoned under the authority and in accordance with the requirements of the controlling State. Where a well has been abandoned in other circumstances, the liability of the operator shall be governed by the applicable national law.

5. If the operator proves that the pollution damage resulted wholly or partly either from an act or omission done with intent to cause damage by the person who suffered the damage or from the negligence of that person, the operator may be exonerated wholly or partly from his liability to such person.

Moreover, under article 10 of the Convention, rights of compensation shall be extinguished within twelve months of the date on which the injured party knew or should reasonably have known of the damage:

*Article 10*

Rights of compensation under this Convention shall be extinguished unless, within twelve months of the date on which the person suffering

the damage knew or ought reasonably to have known of the damage, the claimant has in writing notified the operator of his claim or has brought an action in respect of it. However in no case shall an action be brought after four years from the date of the incident which caused the damage. Where the incident consists of a series of occurrences, the four years' period shall run from the date of the last occurrence.

(b) *Bilateral agreements*

505. Exoneration from liability is stipulated in a few bilateral agreements. It is provided for only in the case of injuries resulting from operations of assistance to the other party, or in such circumstances as war, major calamities, etc. Under the 1959 Convention between France and Spain on mutual assistance in case of fire,<sup>353</sup> the party called upon to provide assistance is exonerated from liability for any damage it might cause (see para. 454 above). Again, the 1961 Treaty between Canada and the United States of America relating to the Columbia River Basin<sup>354</sup> provides, in article XVIII, that neither of the contracting parties shall be liable for injuries resulting from an act, an omission or a delay resulting from *war, strikes, major calamity, act of God, uncontrollable force or maintenance curtailment*. The article reads in part:

*Article XVIII. Liability for damage*

1. Canada and the United States of America shall be liable to the other and shall make appropriate compensation to the other in respect of any act, failure to act, omission or delay amounting to a breach of the Treaty or of any of its provisions other than an act, failure to act, omission or delay occurring by reason of war, strike, major calamity, act of God, uncontrollable force or maintenance curtailment.

2. Except as provided in paragraph 1, neither Canada nor the United States of America shall be liable to the other or to any person in respect of any injury, damage or loss occurring in the territory of the other caused by any act, failure to act, omission or delay under the Treaty whether the injury, damage or loss results from negligence or otherwise.

...

506. Article 13 of the 1970 Treaty between Liberia and the Federal Republic of Germany relating to the use of Liberian ports by the German nuclear ship, the *Otto Hahn*,<sup>355</sup> provides that liability for a nuclear accident shall be governed by article VIII of the 1962 Convention on the Liability of Nuclear Ships, which exonerates operators of nuclear ships from liability in case of damage resulting directly from an *act of war, hostilities, civil war or insurrection* (see para. 489 above).

507. Article 14 of the same Treaty provides for a ten-year period within which claims for compensation must be brought:

*Article 14*

1. Rights of compensation under article 13 of this Treaty shall be extinguished if an action is not brought within ten years from the date of the nuclear incident.

2. Where nuclear damage is caused by nuclear fuel, radioactive products or waste which were stolen, lost, jettisoned, or abandoned, the period established in paragraph 1 shall also be computed from the date of the nuclear incident causing the nuclear damage, but the period shall in no case exceed a period of twenty years from the date of the theft, loss, jettison or abandonment.

3. If the period established in paragraph 1 and the period established in paragraph 2 have not been exceeded, the rights of compensation under article 13 of this Treaty shall be subject to a prescrip-

<sup>353</sup> See footnote 327 above.

<sup>354</sup> See footnote 212 above.

<sup>355</sup> See footnote 19 above.

tion period of three years from the date on which the person who claims to have suffered a nuclear damage had knowledge or ought reasonably to have had knowledge of the damage and of the person liable for the damage.

(c) *Judicial decisions and State practice other than agreements*

508. Judicial decisions and official correspondence reveal no incident in which exoneration from liability

has been recognized. In the few cases where the acting-State has not paid compensation for injuries caused, the injured State does not appear to have agreed with such conduct or recognized it to be within the right of the acting State. Even after the injuries caused by the nuclear tests which, according to the United States Government, had been necessary for reasons of security, that Government had paid compensation for one reason or another without seeking to evade its liability.

## CHAPTER VI

### Compensation

509. State practice relates to both the content and the procedure of compensation. Some treaties provide for a limitation of compensation (limited liability) in case of injuries. These treaties relate principally to activities generally considered essential to present-day civilization, such as the transport of goods and transport services by air, land and sea. The signatories to such treaties have agreed to tolerate such activities, with the potential risks they entail, provided the damage they may cause is compensated. However, the amount of the compensation to be paid for injuries caused is generally set at a level which, from an economic point of view, does not paralyse the pursuit of these activities or obstruct their development. Clearly, this is a deliberate policy decision on the part of the signatories to treaties regulating such activities and, in the absence of such treaties, judicial decisions do not appear to have set limits on the amount of compensation. The study of judicial decisions and official correspondence has not revealed any substantial limitation on the amount of compensation, although some sources indicate that it must be "reasonable" and that the parties have a duty to "mitigate damages".

#### A. Content

##### 1. COMPENSABLE INJURIES

###### (a) *Multilateral agreements*

510. Under a number of conventions, *material injuries* such as loss of life, loss of or damage to property are compensable injuries. Article 1 of the 1963 Vienna Convention on Civil Liability for Nuclear Damage defines nuclear damage as follows:

#### *Article 1*

1. For the purposes of this Convention:

...

(k) "Nuclear damage" means:

- (i) loss of life, any personal injury or any loss of, or damage to, property which arises out of or results from the radioactive properties or a combination of radioactive properties with toxic, explosive or other hazardous properties of nuclear fuel or radioactive products or waste in, or of nuclear material coming from, originating in, or sent to, a nuclear installation;

...

- (iii) if the law of the Installation State so provides, loss of life, any personal injury or any loss of, or damage to, property which

arises out of or results from other ionizing radiation emitted by any other source of radiation inside a nuclear installation.

...

511. The 1966 Additional Convention to the International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 26 February 1961 relating to the liability of the railway for death of and personal injury to passengers provides for the payment of necessary expenses such as the cost of *medical treatment and transport*, and compensation for loss due to *partial or total incapacity to work and increased expenditure on the injured person's personal requirements necessitated by the injury*. In the event of the death of the passenger, the compensation must cover the cost of *transport of the body, burial or cremation*. If the deceased passenger had a legally enforceable duty to support other persons who are now deprived of such support, such persons are entitled to compensation for their loss. *National law* governs the right to compensation for those to whom the deceased was providing *support on a voluntary basis*. Articles 3 and 4 of the Convention read:

#### *Article 3. Damages in case of death of the passenger*

1. In the case of the death of the passenger the damages shall include:

(a) any necessary expenses following on the death, in particular the cost of transport of the body, burial and cremation;

(b) if death does not occur at once, the damages defined in article 4.

2. If, through the death of the passenger, persons towards whom he had, or would have had in the future, a legally enforceable duty to maintain are deprived of their support, such persons shall also be indemnified for their loss. Rights of action for damages by persons whom the passenger was maintaining without being legally bound to do so shall be governed by national law.

#### *Article 4. Damages in case of personal injury to the passenger*

In the case of personal injury or any other bodily or mental harm to the passenger the damages shall include:

(a) any necessary expenses, in particular the cost of medical treatment and transport;

(b) compensation for loss due to total or partial incapacity to work, or to increased expenditure on his personal requirements necessitated by the injury.

512. Under the 1976 Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources, not only "pollution damage" but also *preventive measures* are compensable (art. 1, para. 6). Preventive measures are defined as "any reasonable measures taken by any

person in relation to a particular incident to prevent or minimize pollution damage with the exception of well-control measures and measures taken to protect, repair or replace an installation" (art. 1, para. 7).

513. A few conventions dealing with nuclear materials include express provisions concerning damage other than nuclear damage caused by a nuclear incident or jointly by a nuclear incident and other occurrences. To the extent that those injuries are not reasonably separable from nuclear damage, they are considered nuclear damage and consequently compensable under the conventions. For example, article IV, paragraph 4, of the 1963 Vienna Convention on Civil Liability for Nuclear Damage provides:

*Article IV*

...

4. Whenever both nuclear damage and damage other than nuclear damage have been caused by a nuclear incident or jointly by a nuclear incident and one or more other occurrences, such other damage shall, to the extent that it is not reasonably separable from the nuclear damage, be deemed, for the purposes of this Convention, to be nuclear damage caused by that nuclear incident. Where, however, damage is caused jointly by a nuclear incident covered by this Convention and by an emission of ionizing radiation not covered by it, nothing in this Convention shall limit or otherwise affect the liability, either as regards any person suffering nuclear damage or by way of recourse or contribution, of any person who may be held liable in connection with that emission of ionizing radiation.

...

514. Similarly, article IV of the 1962 Convention on the Liability of Operators of Nuclear Ships provides:

*Article IV*

Whenever both nuclear damage and damage other than nuclear damage have been caused by a nuclear incident or jointly by a nuclear incident and one or more other occurrences and the nuclear damage and such other damage are not reasonably separable, the entire damage shall, for the purposes of this Convention, be deemed to be nuclear damage exclusively caused by the nuclear incident. However, where damage is caused jointly by a nuclear incident covered by this Convention and by an emission of ionizing radiation or by an emission of ionizing radiation in combination with the toxic, explosive or other hazardous properties of the source of radiation not covered by it, nothing in this Convention shall limit or otherwise affect the liability, either as regards the victims or by way of recourse or contribution, of any person who may be held liable in connection with the emission of ionizing radiation or by the toxic, explosive or other hazardous properties of the source of radiation not covered by this Convention.

515. *Non-material injuries* may also be compensable. Thus it is clearly stated in article 5 of the 1966 Additional Convention to the CIV that under *national law* compensation may be required for *mental, physical pain and suffering* and for *disfigurement*:

*Article 5. Compensation for other injuries*

National law shall determine whether and to what extent the railway shall be bound to pay damages for injuries other than those for which there is provision in articles 3 and 4, in particular for mental or physical pain and suffering (*preium doloris*) and for disfigurement.

516. Under article I of the 1963 Vienna Convention on Civil Liability for Nuclear Damage, loss or damage are compensable under the law of the competent court. Hence, if the law of the competent court provides for compensability of *non-material* injury, such injury is compensable under the Convention. Article I, paragraph 1 (k) (ii), of the Convention reads:

(k) "Nuclear damage" means:

(ii) any other loss or damage so arising or resulting if and to the extent that the law of the competent court so provides . . . ;

*(b) Bilateral agreements*

517. The provisions concerning compensable injuries in bilateral agreements vary. For example, the 1951 Agreement between Finland and Norway relating to the transfer of the waters of their shared river (the Näättämo),<sup>356</sup> enumerates the injuries that may be compensated. Article 2 (c) of the Agreement provides for compensation for any *loss of water power* and for *the cost of clearing operations*, both of which injuries are *material* (see para. 452 above).

518. The 1948 Agreement between Poland and the Soviet Union concerning their frontier<sup>357</sup> provides, in article 14, paragraph 2, that the *material* damage resulting from the fault of a contracting party shall give rise to compensation *by the party responsible therefor* (see para. 446 above).

519. A more general language concerning compensable injuries is used in the 1967 Agreement between the Federal Republic of Germany and Austria relating to the operation of the Salzburg Airport.<sup>358</sup> Article 5, paragraph 1, in addition to referring to injuries to persons and property, also mentions injuries to *interests*, but without defining what constitutes interests (see para. 455 above).

520. Article 13 of chapter VI of the 1971 Agreement between Finland and Sweden relating to their frontier rivers provides for compensation for *damage or inconvenience*:

*Article 13*

Where it has been decided that compensation for *damage or inconvenience*\* caused by the operations referred to in article 3 is to be paid in a specified annual amount, such decision shall not prevent the Commission from issuing, in connexion with a decision concerning new or amended regulations to combat pollution or if conditions have otherwise changed, such amended regulations as may be required with regard to compensation and the manner in which it is to be paid.

There is nothing in the Agreement to define *inconvenience* or to indicate whether compensation is confined to *material* injury or also includes *non-material* injury. However, in the context of the Agreement, the *damage or inconvenience* referred to in article 13 may be interpreted as referring to *material* injury.

521. Compensation for *damage or nuisance* is also stipulated in the 1929 Convention between Norway and Sweden concerning their frontier waters,<sup>359</sup> article 6 of which reads:

COMPENSATION

*Article 6*

With regard to compensation for *damage or nuisances*\* resulting from an undertaking, the law of the country in which the damage or nuisance occurs shall apply. With regard to measures for preventing or reducing the damage or nuisance, the law of the country in which the measures are to be carried out shall apply.

<sup>356</sup> See footnote 227 above.

<sup>357</sup> See footnote 39 above.

<sup>358</sup> See footnote 18 above.

<sup>359</sup> See footnote 36 above.

Again, there is no definition of nuisance in the Convention.

(c) *Judicial decisions and State practice other than agreements*

522. Judicial decisions and State practice reveal that only *material* injuries are compensable. Material injuries here refer to physical, tangible or quantitative injuries, as opposed to intangible harm to the dignity of the State. Material injuries which have been compensated in the past include *loss of life*, *personal injury* and *loss of or damage to property*. This has not, however, prevented States from claiming compensation for non-material injuries.

523. State practice shows that in some cases involving potential or actual nuclear contamination or other damage caused by nuclear accidents, which have given rise to great anxiety, reparation has neither been made nor claimed for *non-material* injury. The outstanding examples are the *Palomares* incident and the *Marshall Islands* case. The *Palomares* incident involved the collision between a United States B-52G nuclear bomber and a KC-135 supply plane during a refuelling operation off the coast of Spain, resulting in the dropping of four plutonium-uranium 235 hydrogen bombs, with a destructive power of 1.5 megatons (75 times the power of the Hiroshima bomb).<sup>360</sup> This incident created not only substantial material damage, but also gave rise to fears and anxiety throughout the western Mediterranean basin for two months, until the causes of potential damage had been neutralized. Two of the bombs that fell on land ruptured and discharged their TNT, scattering uranium and plutonium particles near the Spanish coastal village of Palomares, thereby causing imminent danger to the health of the inhabitants and the ecology of the area. Immediate remedial action was taken by the United States and Spain, and it is reported that the United States removed 1,750 tons of mildly radioactive Spanish soil and buried them in the United States.<sup>361</sup> The third bomb hit the ground intact, but the fourth bomb was lost somewhere in the Mediterranean. After a two-month search by submarines and growing apprehension among the nations of the Mediterranean area, the bomb was located, but was lost during the operation for nine more days. Finally, after 80 days of the threat of detonation of the bomb, the device was retrieved.

524. Apparently, the United States *did not* pay any compensation for the apprehension caused by the incident, and there was no formal "open discussion" between Spain and the United States about the legal liability. The accident, however, is unique; if the bomb had not been retrieved, the extent of its damage could not have been measured in monetary terms. The United States could not have left the dangerous "instrument" of its activity in or near Spain and discharged its responsibility by paying compensation.

<sup>360</sup> For further details on this accident, see T. Szuld, *The Bombs of Palomares*, (New York, Viking Press, 1967), and F. Lewis, *One of our H-Bombs is Missing* (New York, McGraw Hill, 1967).

<sup>361</sup> "Radioactive Spanish earth is buried 10 feet deep in South Carolina", *The New York Times*, 12 April 1966, p. 28, col. 3.

525. Following the nuclear tests in the atmosphere undertaken by the United States in *Eniwetok Atoll*, in the Marshall Islands, the Japanese Government did not demand compensation for non-material injuries. In a note by the United States Government concerning the payment of damages through a global settlement, the United States Government referred to the final settlement with the Japanese Government for "any and all injuries, losses, or damages arising out of the said nuclear tests". It was left to the Japanese Government to determine which individual injuries deserved compensation:

Following nuclear testing on March 1, 1954, at the Eniwetok testing grounds, the Government of Japan announced that injuries from radioactive fallout had been sustained on that date by members of the crew of a Japanese fishing vessel, the *Diago Fukuryu Maru*, which at the time of the test was outside the danger zone previously defined by the United States. On September 23, 1954, the chief radio operator, Aikichi Kuboyama, of the fishing vessel died. By an Agreement effected by exchange of notes, January 4, 1955, which entered into force the same day, the United States tendered, *ex gratia*, "as an additional expression of its concern and regret over the injuries sustained" by Japanese fishermen as a result of the nuclear tests in 1954 in the Marshall Islands, the sum of \$2 million for purposes of compensation for the injuries or damages sustained, and in full settlement of any and all claims on the part of Japan for any and all injuries, losses, or damages arising out of the said nuclear tests. The sum paid was, under the Agreement, to be distributed in such an equitable manner as might be determined by the Government of Japan and included provision for a solatium on behalf of each of the Japanese fishermen involved and for the claims advanced by the Government of Japan for their medical and hospitalization expenses.<sup>362</sup>

526. In the *Trail Smelter* case, the tribunal *rejected* the United States proposal that *liquidated damages* be imposed on the operator of the smelter whenever emissions exceeded the predefined limits, regardless of any injuries it might cause. The tribunal stated:

The Tribunal has carefully considered the suggestions made by the United States for a régime by which a prefixed sum would be due whenever the concentrations recorded would exceed a certain intensity for a certain period of time or a certain greater intensity for any twenty minute period.

It has been unable to adopt this suggestion. In its opinion, and in that of its scientific advisers, such a régime would unduly and unnecessarily hamper the operations of the Trail Smelter and would not constitute a "solution fair to all parties concerned".<sup>363</sup>

The tribunal took the view that only *actual injuries incurred* deserved compensation.

527. It may therefore be assumed that the concept of non-material injury is not accepted in State practice in connection with activities causing extraterritorial injuries. States have not made monetary or other reparation for non-material damage. However, States have sometimes demanded reparation for such damage. In at least one case, a State has demanded compensation for violation of its territorial sovereignty. When the *Cosmos 954* crashed on Canadian territory, Canada demanded compensation for the injuries it had sustained by reason of the crash, including violation by the satellite of its territorial sovereignty. Basing its claim on "international precedents", Canada stated:

The intrusion of the *Cosmos 954* satellite into Canada's air space and the deposit on Canadian territory of hazardous radioactive debris

<sup>362</sup> Whiteman, *op. cit.* (footnote 45 above), vol. 4, p. 565.

<sup>363</sup> United Nations, *Reports of International Arbitral Awards*, vol. III, p. 1974.

from the satellite constitutes a violation of Canada's sovereignty. This violation is established by the mere fact of the *trespass*\* of the satellite, the harmful consequences of this intrusion being the damage caused to Canada by the presence of hazardous radioactive debris and the interference with the *sovereign right of Canada*\* to determine the acts that will be performed on its territory. *International precedents recognize that a violation of sovereignty gives rise to an obligation to pay compensation.*<sup>364</sup>

528. In the *Trail Smelter* case, in reply to the United States claim for damages for wrong done in violation of its sovereignty, the tribunal held that it *lacked jurisdiction*. The tribunal found it unnecessary to decide whether the facts proven did or did not constitute an infringement or violation of sovereignty of the United States under international law independently of the Arbitration Convention.<sup>365</sup>

529. State practice reveals instances of *potential material damage*. This category of practice is parallel to the role of *injunction* in judicial decisions, as in the *Nuclear Tests* case. There can certainly be no material injury prior to the operation of a particular injurious activity. Nevertheless, in a few instances, negotiations have taken place to secure the adoption of protective measures, and even to demand the halting of the proposed activity. Such demands have been based on the gravity of the potential damage entailed. The general feeling seems to be that States must take reasonable protective measures to ensure, outside the limits of their territorial sovereignty, the safety and harmlessness of their lawful activities. Of course, the *potential* harm must be *incidental* and *unintentional*; none the less, the potentially injured States have the right to demand that protective measures be taken.

530. State practice regarding liability for reparation of actual damage is more settled. There is clearer acceptance of the explicit or implicit liability of States for their behaviour. In connection with a few incidents, States have also accepted responsibility for reparation of *actual damage* caused by the activities of private persons in their territorial jurisdiction or under their control. In the River Mura incident, Yugoslavia claimed damages from Austria for the *economic loss* incurred by two paper mills and by the fisheries, as a result of the extensive pollution caused by the Austrian hydroelectric facilities (see para. 478 above). In the tanker *Juliana* incident, the flag State, Liberia, offered 200 million yen to the Japanese fishermen in compensation for the *damage* which they had suffered as a result of the *Juliana* running aground and washing its oil on the coast of Japan (see para. 479 above).

531. Compensation has been made where an activity occurring in the shared domain has required the *relocation of people*. In connection with the United States nuclear tests in the *Eniwetok Atoll*, the compensation entailed payment for temporary usage of land and for *relocation costs* (see para. 84 above).

532. In the *Trail Smelter* case, the tribunal awarded the United States damages in respect of *physical damage to cleared land and uncleared land and buildings by*

*reason of the reduction in crop yield and in the rental value of the land and buildings* and, in one instance, of *soil impairment*. The denial of damages for other injuries, it appears, resulted mainly from *failure of proof*. With respect to damage to cleared land used for crops, the tribunal found that damage through reduction in crop yield due to fumigation had occurred in varying degrees during each of the years 1932 to 1936, but found no proof of damage in the year 1937. The properties owned by individual farmers which allegedly had suffered damage had been divided by the United States into three classes: (a) properties of "farmers residing on their farms"; (b) properties of "farmers who do not reside on their farms"; (a, b) properties of "farmers who were driven from their farms"; and (c) properties of large owners of land. The tribunal did not adopt that division, and adopted as the *measure of indemnity* to be applied on account of damage in respect of cleared land used for crops *the measures of damage which the American Courts applied in cases of nuisance or trespass* of the type involved in the case, namely, the amount of *reduction in the value of use or rental value of the land* caused by fumigations.<sup>366</sup>

533. The tribunal found that, in the case of farm land, such reduction in the value of the use was in general the amount of the reduction of the crop yield arising from injury to crops, less cost of marketing the same.<sup>367</sup> In the opinion of the tribunal, the *failure* of farmers to increase their seeded land in proportion to such increase in other localities might also be taken into consideration. This is an example of the *duty to mitigate the injury*.

534. With regard to the problem of abandonment of properties by their owners, the tribunal noted that practically all such properties listed appeared to have been abandoned prior to the year 1932. In order to deal with that problem as well as with that of farmers who had been unable to increase their seeded land, the tribunal decided to estimate the damage on the basis of the *statistical data* available concerning the *average acreage* on which it was reasonable to believe that crops would have been seeded and harvested during the period under consideration but for the fumigations.<sup>368</sup>

535. With regard to claims for *impairment of the soil content* through increased acidity produced by the sulphur dioxide contained in the waters, the tribunal considered that the evidence put forward in support of that contention was not conclusive, except in the case of one small area in respect of which an indemnity was awarded.<sup>369</sup> The tribunal also awarded an indemnity for *reduction in the value* of farms in proximity to the frontier line by reason of their exposure to the fumigations.<sup>370</sup>

536. With regard to the claim that the fumes had inhibited the growth and reproduction of timber, the tribunal adopted the measure of damages applied in

<sup>366</sup> *Ibid.*, pp. 1924-1925.

<sup>367</sup> *Ibid.*, p. 1925.

<sup>368</sup> *Ibid.*

<sup>369</sup> *Ibid.*

<sup>370</sup> *Ibid.*, p. 1926.

<sup>364</sup> *International Legal Materials* (Washington, D.C.), vol. 18, p. 907, para. 21.

<sup>365</sup> United Nations, *Reports of International Arbitral Awards*, vol. III, p. 1932.



**United States courts, namely, *reduction in value of the land itself due to such destruction and impairment*:**

(b) With regard to damage due to destruction and impairment of growing timber (not of merchantable size), the Tribunal has adopted the measure of damages applied by American courts, *viz.*, the reduction in value of the land itself due to such destruction and impairment. Growing timberland has a value for firewood, fences, etc., as well as a value as a source of future merchantable timber. No evidence has been presented by the United States as to the locations or as to the total amounts of such growing timber existing on January 1, 1932, or as to its distribution into types of conifers—yellow pine, Douglas fir, larch or other trees. While some destruction or impairment, deterioration, and retardation of such growing timber has undoubtedly occurred since such date, it is impossible to estimate with any degree of accuracy the amount of damage. The Tribunal has, however, taken such damage into consideration in awarding indemnity for damage to land containing growing timber.

(c) With respect to damage due to the alleged lack of reproduction, the Tribunal has carefully considered the contentions presented. The contention made by the United States that fumigation prevents germination of seed is, in the opinion of the Tribunal, not sustained by the evidence. Although the experiments were far from conclusive, Hedgcock's studies tend to show, on the contrary, that, while seedlings were injured after germination owing to drought or to fumes, the actual germination did take place.

With regard to the contention made by the United States of damage due to failure of trees to produce seed as a result of fumigation, the Tribunal is of opinion that it is not proved that fumigation prevents trees from producing sufficient seeds, except in so far as the parent-trees may be destroyed or deteriorated themselves. This view is confirmed by the Hedgcock studies on cone production of yellow pine. There is a rather striking correlation between the percentage of good, fair, and poor trees found in the Hedgcock Census studies and the percentages of trees bearing a normal amount of cones, trees bearing few cones, and trees bearing no cones in the Hedgcock cone production studies. In so far, however, as lack of cone production since January 1, 1932, is due to death or impairment of the parent-trees occurring before the date, the Tribunal is of opinion that such failure of reproduction both was caused and occurred prior to January 1, 1932, with one possible exception as follows: From standard American writings on forestry, it appears that seeds of Douglas fir and yellow pine rarely germinate more than one year after they are shed, but if a tree was killed by fumigation in 1931, germination from its seeds might occur in 1932. It appears, however, that Douglas fir and yellow pine only produce a good crop of seeds once in a number of years. Hence, the Tribunal concludes that the loss of possible reproduction from seeds which might have been produced by trees destroyed by fumigation in 1931 is too speculative a matter to justify any award of indemnity.

It is fairly obvious from the evidence produced by both sides that there is a general lack of reproduction of both yellow pine and Douglas fir over a fairly large area, and this is certainly due to some extent to fumigations. But, with the data at hand, it is impossible to ascertain to what extent this lack of reproduction is due to fumigations or to other causes such as fires occurring repeatedly in the same area or destruction by logging of the cone-bearing trees. It is further impossible to ascertain to what extent lack of reproduction due to fumigations can be traced to mortality or deterioration of the parent-trees which occurred since the first of January, 1932. It may be stated, in general terms, that the loss of reproduction due to the forest being depleted will only become effective when the amount of these trees per acre falls below a certain minimum. But the data at hand do not enable the Tribunal to say where and to what extent a depletion below this minimum occurred through fumigations in the years under consideration. An even approximate appraisal of the damage is further complicated by the fact that there is evidence of reproduction of lodgepole pine, cedar, and larch, even close to the boundary and in the Columbia River Valley, at least in some locations. This substitution may not be due entirely to fumigations, as it appears from standard American works on conifers that reproduction of yellow pine is often patchy; that when yellow pine is substantially destroyed in a given area, it is generally supplanted by another species of trees; and that lodgepole pine in particular has a tendency to invade and take full possession of yellow pine territory when a fire has occurred. While the other species are inferior, their reproduction is, nevertheless, a factor which has to be taken into account; but here again quantitative data are entirely lacking. It is further to be noted that the amount of rain-

fall is an important factor in the reproduction of yellow pine, and that where the normal annual rainfall is but little more than eighteen inches, yellow pine does not appear to thrive. It appears in evidence that the annual precipitation at Northport, in a period of fourteen years from 1923 to 1936, averaged slightly below seventeen inches. With all these considerations in mind, the Tribunal has, however, taken lack of reproduction into account to some extent in awarding indemnity for damage to uncleared land in use for timber.

On the basis of the foregoing statements as to damage and as to indemnity for damage with respect to cleared land and uncleared land, the Tribunal has awarded with respect to damage to cleared land and to uncleared land (other than uncleared land used for timber), an indemnity of sixty-two thousand dollars (\$62,000); and with respect to damage to uncleared land used for timber an indemnity of sixteen thousand dollars (\$16,000)—being a total indemnity of seventy-eight thousand dollars (\$78,000). Such indemnity is for the period from January 1, 1932, to October 1, 1937.

There remain for consideration three other items of damage claimed in the United States Statement: (Item c) "Damages in respect of livestock"; (Item d) "Damages in respect of property in the town of Northport"; (Item g) "Damages in respect of business enterprises".<sup>371</sup>

**537. The United States had *failed to prove* damage in respect of livestock:**

(3) With regard to "damages in respect of livestock", claimed by the United States, the Tribunal is of opinion that the United States has failed to prove that the presence of fumes from the Trail Smelter has injured either the livestock or the milk or wool productivity of livestock since January 1, 1932, through impaired quality of crop or grazing. So far as the injury to livestock is due to reduced yield of crop or grazing, the injury is compensated for in the indemnity which is awarded herein for such reduction of yield.<sup>372</sup>

**538. Again, *proof of damage* to property in the town of Northport was also insufficient:**

(4) With regard to "damages in respect of property in the town of Northport", the same principles of law apply to assessment of indemnity to owners of urban land as apply to owners of farm and other cleared land, namely, that the measure of damage is the reduction in the value of the use or rental value of the property, due to fumigations. The Tribunal is of opinion that there is no proof of damage to such urban property; that even if there were such damage, there is no proof of facts sufficient to enable the Tribunal to estimate the reduction in the value of the use or rental value of such property; and that it cannot adopt the method contended for by the United States of calculating damages to urban property.<sup>373</sup>

**539. With regard to *damages in respect of business enterprises*, the United States had claimed that the businessmen had suffered *loss of business and impairment of the value of goodwill* because of the reduced economic status of the residents of the damaged area. The tribunal found that such damage was *too indirect, remote and uncertain* to be appraised and *not such for which* an indemnity could be awarded. In the opinion of the tribunal, the argument that indemnity should be obtained for an injury to or reduction in a man's business due to the inability of his customers or clients to buy—which inability or impoverishment had been caused by a nuisance, even if proved—was *too indirect and remote* to become the *basis, in law*, for an award of indemnity.<sup>374</sup>**

**540. The United States contention of *pollution of waterways had not been proved* and, since the tribunal considered itself bound by the terms of the Arbitration Convention, it did not consider the United States re-**

<sup>371</sup> *Ibid.*, pp. 1929-1931.

<sup>372</sup> *Ibid.*, p. 1931.

<sup>373</sup> *Ibid.*

<sup>374</sup> *Ibid.*

quest for indemnity for *money expended in the investigation* undertaken concerning the problems created by the smelter. The United States had made this claim in connection with its *action for violation of sovereignty*. The tribunal, however, appeared to recognize the possibility of *granting indemnity for the expenses of processing claims*. It agreed that in some cases of international arbitration, damages had been awarded for expenses, not as compensation for violation of territorial sovereignty, but as compensation for expenses incurred by individual claimants in prosecuting their claims for wrongful acts by the offending Governments. For the tribunal, the difficulty lay not so much in the content of the claim as in its characterization as damages for violation of territorial sovereignty. It therefore decided that "neither as a separable item of damage nor as an incident to other damage should any award be made for that which the United States terms 'violation of sovereignty' ".<sup>375</sup>

541. In the *Alabama* case, the tribunal awarded damages in respect of *net freights lost and other undefined damage resulting from Great Britain's failure to exercise "due diligence"*. However, damages in respect of the *costs of pursuit* of the confederate cruisers outfitted in British ports were *denied* because such costs could not be *distinguished* from the *ordinary expenses* of the war, as were damages in respect of *prospective earnings* since they *depended on future and uncertain contingencies*.<sup>376</sup>

542. In its claim against the Soviet Union for injuries resulting from the crash of the Soviet nuclear-powered satellite *Cosmos 954* on Canadian territory, Canada stressed the duty to *mitigate damages*:

Under general principles of international law, Canada had a duty to take the necessary measures to prevent and reduce the harmful consequences of the damage and thereby to mitigate damages. Thus, with respect to the debris, it was necessary for Canada to undertake without delay operations of search, recovery, removal, testing and clean-up. These operations were also carried out in order to comply with the requirements of the domestic law of Canada. Moreover, article VI of the Convention [on International Liability for Damage caused by Space Objects] imposes on the claimant State a duty to observe reasonable standards of care with respect to damage caused by a space object.<sup>377</sup>

543. The Canadian claim also indicated that the compensation sought was *reasonable, proximately caused by the accident and capable of being calculated with a reasonable degree of certainty*:

In calculating the compensation claimed, Canada has applied the relevant criteria established by general principles of international law according to which fair compensation is to be paid, by including in its claim only those costs that are reasonable, proximately caused by the intrusion of the satellite and deposit of debris and capable of being calculated with a reasonable degree of certainty.<sup>378</sup>

544. The Atlantic Richfield Corporation (ARCO), which operated the refinery at *Cherry Point*, in the State of Washington, where some 12,000 gallons of crude oil had spilled into the sea in 1972 (see para. 436 above), paid an initial *clean-up bill* of \$19,000 submitted by the

municipality of Surrey to cover its operations. ARCO later agreed to pay another \$11,606.50, to be transmitted by the United States to the Canadian Government, for its *costs incurred in connection with the clean-up operation*, but refused to reimburse an additional item of \$60 designated "bird loss (30 birds at \$2 a bird)". The payment was made "without admitting any liability in the matter and without prejudice to its rights and legal position".<sup>379</sup>

## 2. FORMS OF COMPENSATION

545. In State practice, compensation for extraterritorial damage caused by activities conducted within the territorial jurisdiction or under the control of States has been paid either in the form of a lump sum to the injured State, so that it may settle individual claims, or direct to the individual claimants. The forms of compensation prevailing in relations between States are similar to those existing in domestic law. Indeed, some conventions provide that national legislation is to govern the question of compensation. When damages are monetary, States have generally sought to select readily convertible currencies.

### (a) Multilateral agreements

546. While references to the forms of compensation are made in multilateral conventions, they are not sufficiently detailed. Attempts have been made in the conventions to make the compensation useful to the injured party in terms of currency and of its transferability from one State to another. Under the 1960 Convention on Third Party Liability for Nuclear Energy, for example, the nature, form and extent of the compensation as well as its *equitable distribution* has to be governed by *national law*. Furthermore, the compensation must be freely *transferable* between the contracting parties. The relevant provisions of the Convention are:

#### Article 7

(g) Any interest and costs awarded by a court in actions for compensation under this Convention shall not be considered to be compensation for the purposes of this Convention and shall be payable by the operator in addition to any sum for which he is liable in accordance with this article.

#### Article 11

The nature, form and extent of the compensation, within the limits of this Convention, as well as the equitable distribution thereof, shall be governed by national law.

#### Article 12

Compensation payable under this Convention, insurance and re-insurance premiums, sums provided as insurance, reinsurance, or other financial security required pursuant to article 10, and interest and costs referred to in article 7 (g), shall be freely transferable between the monetary areas of the Contracting Parties.

547. The 1966 Additional Convention to the International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 26 February 1961 relating to the liability of railways for death of and personal injury to passengers also provides that, for certain injuries, compensation may be awarded in the form

<sup>375</sup> *Ibid.*, pp. 1932-1933.

<sup>376</sup> Moore, *op. cit.* (footnote 306 above), p. 658.

<sup>377</sup> *International Legal Materials* (Washington, D.C.), vol. 18, pp. 905-906, para. 17.

<sup>378</sup> *Ibid.*, p. 907, para. 23.

<sup>379</sup> *The Canadian Yearbook of International Law* 1973, vol. 11, pp. 333-334; and *Montreal Star*, 9 June 1972.

of a lump sum. However, if *national law* permits, payment of an *annuity* or, if the injured passenger so requests, compensation, shall be awarded as an annuity. Such forms of damages are also provided for injuries suffered by persons for whose support the deceased passenger was legally responsible, as well as for medical treatment and transport of an injured passenger and for loss due to his total or partial incapacity to work. The relevant provisions of the Convention read:

*Article 6. Form and limit of damages in case of death of, or personal injury to the passenger*

1. The damages under article 3 (2) and article 4 (b) shall be awarded in the form of a lump sum; however, if national law permits payment of an annuity, damages shall be awarded in this form if so requested by the injured passenger or the claimants designated in article 3 (2).

*Article 9. Interest and refund of compensation*

1. The claimant shall be entitled to claim interest on compensation which shall be calculated at the rate of 5 per cent per annum. Such interest shall accrue from the date of the claim, or, if a claim has not been made, from the date on which legal proceedings are instituted, save that for compensation due under articles 3 and 4, interest shall accrue only from the day on which the events relevant to its assessment occurred, if that day is later than the date of the claim or the date on which legal proceedings were instituted.

2. Any compensation improperly obtained shall be refunded.

548. The 1962 Convention on the Liability of Operators of Nuclear Ships states the value in gold of the franc, the currency in which compensation must be paid. It also provides that the awards may be *converted* into each national currency in round figures and that conversion into national currencies other than gold shall be effected on the basis of their gold value. Paragraph 4 of article III of the Convention reads:

*Article III*

...

4. The franc mentioned in paragraph 1 of this article is a unit of account constituted by sixty-five and one half milligrams of gold of millesimal fineness nine hundred. The amount awarded may be converted into each national currency in round figures. Conversion into national currencies other than gold shall be effected on the basis of their gold value at the date of payment.

549. If agreed between the parties concerned, compensation under the 1972 Convention on International Liability for Damage Caused by Space Objects may be paid in any currency; otherwise, it is to be paid in the currency of the *claimant State*. If the claimant State agrees, the compensation may be paid in the currency of the *State from which compensation is due*. Article XIII of the Convention reads:

*Article XIII*

Unless the claimant State and the State from which compensation is due under this Convention agree on another form of compensation, the compensation shall be paid in the currency of the claimant State or, if that State so requests, in the currency of the State from which compensation is due.

(b) *Bilateral agreements*

550. Most bilateral agreements regarding activities likely to result in extraterritorial injuries are silent on the forms of compensation. The decision thereon appears to have been left to the relevant organs under the individual agreements, whether local courts, joint commissions or government authorities. At least two

bilateral agreements refer to the forms of compensation.

551. In the 1964 Agreement between the United States of America and Ireland concerning the use of Irish ports by the United States nuclear ship, the *N.S. Savannah*,<sup>380</sup> the United States Government agrees to ensure *prompt* payment in respect of its liability for nuclear damage under the Agreement. Paragraph 5 (note 1) of the Agreement reads:

5. The Government of the United States shall ensure that *prompt*\* payment is made in respect of the liability referred to in paragraph 1 of this Agreement.

552. Article 13 of chapter VI of the 1971 Agreement between Finland and Sweden concerning frontier rivers provides that compensation is to be paid in a *specific annual amount* (see para. 520 above).

(c) *Judicial decisions and State practice other than agreements*

553. The forms of compensation are referred to in judicial decisions and official correspondence in only a few cases, such as the compensation afforded Japan by the United States for injuries arising out of the Pacific nuclear tests (see para. 525 above) and the compensation required of the United Kingdom in the *Alabama* case.<sup>381</sup> In each case, a lump sum payment was made in order to allow the injured States to pay equitable compensation to the injured individuals.

554. In addition to monetary compensation, compensation has occasionally consisted in removing the danger or effecting *restitutio in integrum*. That was the case, for example, in the *Palomares* incident, in 1966, when nuclear bombs dropped on Spanish territory and near the coasts of Spain following a collision between a United States nuclear bomber and a supply plane. In a situation where the damage or danger of damage is so grave, the primary compensation is *restitution*, that is, removing *the cause of the damage* and restoring the area to its condition prior to the incident. The United States removed the causes of danger from Spain by retrieving the bombs and by removing the contaminated Spanish soil and burying it in its own territory.<sup>382</sup>

555. Following the nuclear tests conducted in the Marshall Islands, the United States reportedly spent nearly \$110 million to clean up several of the islands of the *Eniwetok Atoll* so that they could again become habitable. However, one of the islands of the Runit Atoll, which had been used to bury nuclear debris, was declared off-limits for 20,000 years.<sup>383</sup> A clean-up operation is not restitution, but the intention and the policy behind it are similar. Following the accidental pollution of the *Mura River*, Austria, in addition to paying monetary compensation for the damage caused to Yugoslav fisheries and paper mills, delivered a certain quantity of paper to Yugoslavia (see para. 478 above).

<sup>380</sup> See footnote 21 above.

<sup>381</sup> Moore, *op. cit.* (footnote 306 above), p. 568.

<sup>382</sup> *The New York Times*, 12 April 1966, p. 28, col. 3.

<sup>383</sup> *International Herald Tribune*, 15 June 1982, p. 5, col. 2.

## 3. LIMITATION ON COMPENSATION

556. As in domestic law, State practice has provided for limitations on compensation, particularly in connection with activities which, although important to present-day civilization, can be very injurious, as well as with activities capable of causing devastating injuries, such as those involving the use of nuclear materials. The provisions on limitation of compensation have been carefully designed to fulfil two objectives: (a) to protect industries from an unlimited liability that would paralyse them financially and discourage their future development; (b) ensure reasonable and fair compensation for those who suffer injuries as a result of these dangerous activities.

## (a) Multilateral agreements

557. The 1960 Convention on Third Party Liability in the Field of Nuclear Energy is drafted to deal systematically and uniformly only with the question of liability and compensation in the field of nuclear energy. In the preamble to the Convention, the Governments of the signatory States specifically declare themselves desirous of "ensuring *adequate\* and equitable\** compensation for persons who suffer damage caused by nuclear incidents while taking the necessary steps to *ensure that development of the production and uses of nuclear energy for peaceful purposes is not thereby hindered\*\**". Article 7 of the Convention defines the minimum and maximum amounts of compensation:

## Article 7

(a) The aggregate of compensation required to be paid in respect of damage caused by a nuclear incident shall not exceed the maximum liability established in accordance with this article.

(b) The maximum liability of the operator in respect of damage caused by a nuclear incident shall be 15,000,000 European Monetary Agreement units of account as defined at the date of this Convention (hereinafter referred to as "units of account"): provided that any Contracting Party, taking into account the possibilities for the operator of obtaining the insurance or other financial security required pursuant to article 10, may establish by legislation a greater or less amount, but in no event less than 5,000,000 units of account. The sums mentioned above may be converted into national currency in round figures.

(c) Any Contracting Party may by legislation provide that the exception in article 3 (a) (ii) (2) shall not apply: provided that in no case shall the inclusion of damage to the means of transport result in reducing the liability of the operator in respect of other damage to an amount less than 5,000,000 units of account.

(d) The amount of liability of operators of nuclear installations in the territory of a Contracting Party established in accordance with paragraph (b) of this article as well as the provisions of any legislation of a Contracting Party pursuant to paragraph (c) of this article shall apply to the liability of such operators wherever the nuclear incident occurs.

(e) A Contracting Party may subject the transit of nuclear substances through its territory to the condition that the maximum amount of liability of the foreign operator concerned be increased, if it considers that such amount does not adequately cover the risks of a nuclear incident in the course of the transit: provided that the maximum amount thus increased shall not exceed the maximum amount of liability of operators of nuclear installations situated in its territory.

(f) The provisions of paragraph (e) of this article shall not apply:

- (i) to carriage by sea where, under international law, there is a right of entry in cases of urgent distress into the ports of such Contracting Party or a right of innocent passage through its territory; or

- (ii) to carriage by air where, by agreement or under international law there is a right to fly over or land on the territory of such Contracting Party.

...

558. Under the 1952 Convention on Damage Caused by Foreign Aircraft to Third Parties on the Surface, if the total amount of claims established exceeds the limit of liability, they shall be reduced in proportion to their respective amounts in respect of claims exclusively for loss of life or personal injury *or* exclusively for damage to property. But if the claims concern both loss of life or personal injury *and* damage to property, *one half of the total sum shall be allocated preferentially for loss of life or personal injury*. The remainder shall be distributed *proportionately* among the claims in respect of damage to property and the portion not already covered of the claims in respect of *loss of life and personal injury*. Article 14 of the Convention reads:

## Article 14

If the total amount of the claims established exceeds the limit of liability applicable under the provisions of this Convention, the following rules shall apply, taking into account the provisions of paragraph 2 of article 11:

(a) If the claims are exclusively in respect of loss of life or personal injury or exclusively in respect of damage to property, such claims shall be reduced in proportion to their respective amounts.

(b) If the claims are both in respect of loss of life or personal injury and in respect of damage to property, one half of the total sum distributable shall be appropriated preferentially to meet claims in respect of loss of life and personal injury and, if insufficient, shall be distributed proportionately between the claims concerned. The remainder of the total sum distributable shall be distributed proportionately among the claims in respect of damage to property and the portion not already covered of the claims in respect of loss of life and personal injury.

559. The 1966 Additional Convention to the International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 26 February 1961 relating to the liability of the railway for death of and personal injury to passengers provides for limitation of liability. However, if the damage is caused by the *wilful misconduct* or *gross negligence* of the railway, the limitation of liability is removed. Articles 7 and 8 read:

## Article 7. Limit of damages in case of damage to or loss of articles

When, under the provisions of this Convention, the railway is liable to pay damages for damage to, or for total or partial loss of any articles which the passenger who has sustained an accident had either on him or with him as hand luggage, including any animals which he had with him, compensation for the damage may be claimed up to the sum of 2,000 francs per passenger.

## Article 8. Amount of damages in case of wilful misconduct or gross negligence

The provisions of articles 6 and 7 of this Convention or those of the national law which limit compensation to a fixed amount shall not apply if the damage results from wilful misconduct or gross negligence of the railway.

560. Article 10 of the Convention nullifies any agreement between passengers and the railway in which the liability of the railway is *precluded* or has been *limited to a lower amount* than that provided for in the Convention. Articles 10 and 12 read:

## Article 10. Prohibition of limitation of liability

Any terms or conditions of carriage or special agreements concluded between the railway and the passenger which purport to

exempt the railway in advance, either totally or partially, from liability under this Convention, or which have the effect of reversing the burden of proof resting on the railway, or which provide for limits lower than those laid down in article 6 (2) and article 7, shall be null and void. Such nullity shall not, however, avoid the contract of carriage which shall remain subject to the provisions of CIV and this Convention.

*Article 12. Bringing of actions not within the provisions of this Convention*

No action of any kind shall be brought against a railway in respect of its liability under article 2 (1) of this Convention, except subject to the conditions and limitations laid down in this Convention.

The same shall apply to any action brought against persons for whom the railway is liable under article 11.

561. The preamble to the 1957 International Convention relating to the Limitation of the Liability of Owners of Seagoing Ships clearly indicates the objectives of the contracting parties:

The High Contracting Parties,

Having recognized the desirability of determining by agreement certain uniform rules relating to the limitation of liability of owners of seagoing ships;

Having decided to conclude a Convention for this purpose, . . .

562. Article 1 of the Convention reads:

*Article 1*

1. The owner of a seagoing ship may limit his liability in accordance with article 3 of this Convention in respect of claims arising from any of the following occurrences, unless the occurrence giving rise to the claim resulted from the actual fault or privity of the owner:

(a) loss of life of, or personal injury to, any person being carried in the ship, and loss of, or damage to, any property on board the ship;

(b) loss of life of, or personal injury to, any other person, whether on land or on water, loss of or damage to any other property or infringement of any rights caused by the act, neglect or default of any person on board the ship for whose act, neglect or default the owner is responsible or any person not on board the ship for whose act, neglect or default the owner is responsible: provided however that in regard to the act, neglect or default of this last class of person, the owner shall only be entitled to limit his liability when the act, neglect or default is one which occurs in the navigation or the management of the ship or in the loading, carriage or discharge of its cargo or in the embarkation, carriage or disembarkation of its passengers;

(c) any obligation or liability imposed by any law relating to the removal of wreck and arising from or in connection with the raising, removal or destruction of any ship which is sunk, stranded or abandoned (including anything which may be on board such ship) and any obligation or liability arising out of damage caused to harbour works, basins and navigable waterways.

2. In the present Convention the expression "personal claims" means claims resulting from loss of life and personal injury; the expression "property claims" means all other claims set out in paragraph 1 of this article.

Under paragraph 3 of article 1, the limitation of liability of the seagoing ship will cease if it is proved that the injury was caused by the *negligence* of the shipowner, or of persons for whose conduct he is responsible. The question upon whom lies the burden of proving whether there has been a fault is to be determined by the law of the forum. Paragraph 6 of article 1 reads:

6. The question upon whom lies the burden of proving whether or not the occurrence giving rise to the claim resulted from the actual fault or privity of the owner shall be determined by the *lex fori*.

If an action is brought against the master of a ship or a member of the crew, their liability is still limited even if the accident causing injury is due to their fault. But if the master or the member of the crew is at the same time the owner, co-owner, charter manager or operator of

the seagoing ship, the limitation of liability applies only when the act of neglect or default is committed by such persons in their capacity as master or member of the crew. Paragraph 3 of article 6 provides:

3. When actions are brought against the master or against members of the crew such persons may limit their liability even if the occurrence which gives rise to the claims resulted from the actual fault or privity of one or more of such persons. If, however, the master or member of the crew is at the same time the owner, co-owner, charterer, manager or operator of the ship the provisions of this paragraph shall only apply where the act, neglect or default in question is an act, neglect or default committed by the person in question in his capacity as master or as member of the crew of the ship.

563. The liability of the operator is also limited under article 6 of the 1976 Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources, paragraphs 1, 2 and 3 of article 6 of which read:

*Article 6*

1. The operator shall be entitled to limit his liability under this Convention for each installation and each incident to the amount of 30 million Special Drawing Rights until five years have elapsed from the date on which the Convention is opened for signature and to the amount of 40 million Special Drawing Rights thereafter.

2. Where operators of different installations are liable in accordance with paragraph 1 of article 5, the liability of the operator of any one installation shall not for any one incident exceed any limit which may be applicable to him in accordance with the provisions of this article and of article 15.

3. When in the case of any one installation more than one operator is liable under this Convention, the aggregate liability of all of them in respect of any one incident shall not exceed the highest amount that could be awarded against any of them, but none of them shall be liable for an amount in excess of the limit applicable to him.

Under paragraph 4 of the same article 6, the operator will not be entitled to limit his liability if it is proved that the pollution damage occurred as a result of an act or omission of the operator himself, done deliberately with actual knowledge that pollution damage will result. Two elements are thus required to remove the limitation on liability: one is an act or *omission* of the operator, and the second is *actual knowledge* that pollution damage will result. Hence the negligence of the operator does not, under this Convention, remove the limitation on liability.

*(b) Bilateral agreements*

564. Although in most bilateral agreements regarding activities that might have extraterritorial injurious consequences no limitation on liability is provided for, a few of them include provisions on that question. These agreements all relate to the use of the ports of host States by the nuclear ships of other States. In the 1963 Agreement between the Netherlands and the United States of America on public liability for damage caused by the N.S. *Savannah*,<sup>184</sup> the liability of the United States is limited to \$500 million, as follows:

*Article 4*

It is agreed that the aggregate liability of the United States arising out of a single nuclear incident involving the N.S. *Savannah*, regardless of where damage may be suffered, shall not exceed \$500 million.

565. Similarly, in the two agreements concluded in 1964 and 1965 between the United States of America

<sup>184</sup> See footnote 22 above.

and Italy concerning the N.S. *Savannah*, the limitation on liability was set at \$500 million, in accordance with United States legislation (see art. VIII of the 1964 Agreement and note I of the 1965 Agreement, in paras. 458 and 459 above). In a similar agreement concluded in 1964 with Ireland,<sup>385</sup> the liability of the United States for any damage that the N.S. *Savannah* might cause on Irish territory was also limited to \$500 million. Paragraphs 2 and 7 of the Agreement read:

2. The aggregate liability of the United States Government in accordance with paragraph 1 of this Agreement shall not exceed \$500 million for any single incident regardless of where damage may be incurred.

...

7. Subject to the \$500 million limitation referred to above, nothing in this Agreement shall affect any right which the Government of Ireland might otherwise have under international law in respect of the operation of N.S. *Savannah* and any claims relating thereto shall be dealt with in accordance with customary procedures for the settlement of international claims under generally accepted principles of law and equity. In particular, the two Governments will consult together, in the event of a nuclear incident, and in such consultations the question of liability and amount of compensation to those who have suffered loss or damage as a result of such incident shall be subject to the mutual agreement of the two Governments.

566. Again, the 1970 Treaty between Liberia and the Federal Republic of Germany<sup>386</sup> sets a limit of DM 400 million on liability for any damage that might be caused by the German nuclear ship, *Otto Hahn*, while visiting Liberian ports. Article 13 of the Treaty reads:

#### Article 13

Liability for a nuclear damage caused by a nuclear incident involving the nuclear fuel of, or radioactive products or waste produced in the ship shall be governed by article II, paragraph 1 of article III, article IV, article VIII, and paragraphs 1 and 2 of article X of the Convention [on the Liability of Operators of Nuclear Ships] as well as by the following articles of this Treaty, provided, however, that the liability mentioned in paragraph 1 of article III of the Convention shall be limited to DM 400 million (four hundred million).

Article 17 of the same Treaty, however, stipulates that the provisions of national legislation and international conventions on limitation of shipowners' liability shall not apply to nuclear damage under that Treaty:

#### Article 17

The provisions of national legislation or international conventions on the limitation of shipowners' liability shall not apply to claims established under article 13 of this Treaty.

#### (c) *Judicial decisions and State practice other than agreements*

567. Judicial decisions and official correspondence reveal no limitation on compensation other than that agreed upon in treaties. Some references have been made to equitable, fair and adequate compensation. By a broad interpretation, limitation on compensation may sometimes be compatible with equitable and fair compensation.

### B. Authorities competent to award compensation

568. Article 33 of the Charter of the United Nations provides a wide choice of peaceful modes of dispute settlement from the most informal to the most formal:

#### Article 33

1. The parties to any dispute, the continuance of which is likely to endanger the maintenance of international peace and security, shall, first of all, seek a solution by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice.

2. The Security Council shall, when it deems necessary, call upon the parties to settle their disputes by such means.

569. State practice reveals that these modes of settlement of disputes have been utilized to resolve questions of liability and compensation relating to acts with extraterritorial injurious consequences. International courts, arbitral tribunals, joint commissions as well as domestic courts have decided on those questions. Generally, on the basis of prior agreements among States, the Permanent Court of International Justice, the International Court of Justice and arbitral tribunals have dealt with disputes relating to the utilization of and activities on the continental shelf, in the territorial sea, etc. When there have been ongoing activities, usually among neighbouring States, such as the use of shared waters, for which there are established institutions constituted by States, claims arising from these activities have normally been referred to the joint institution or commission concerned.

### 1. LOCAL COURTS AND AUTHORITIES

#### (a) *Multilateral agreements*

570. A number of multilateral agreements refer to local courts and authorities as competent authorities to decide on questions of liability and compensation. With regard to activities, primarily of a commercial nature, in which the actors are private entities and the primary liability is that of the operator, local courts have been recognized as appropriate decision makers. For example, the 1960 Convention on Third Party Liability in the Field of Nuclear Energy confers jurisdiction *only* on the courts of the contracting State in whose territory the nuclear installation of the operator liable is located. When the nuclear incident occurs during transportation, jurisdiction lies, unless as otherwise provided, with the courts of the contracting State in whose territory the nuclear substances involved were at the time of the incident. Article 13 of the Convention indicates in detail how jurisdiction is divided among the *domestic courts* of the contracting parties, according to the place of occurrence of the nuclear incident:

#### Article 13

(a) Except as otherwise provided in this article, jurisdiction over actions under articles 3, 4, 6(a) and 6(e) shall lie only with the courts of the Contracting Party in whose territory the nuclear incident occurred.

(b) Where a nuclear incident occurs outside the territory of the Contracting Parties, or where the place of the nuclear incident cannot be determined with certainty, jurisdiction over such actions shall lie with the courts of the Contracting Party in whose territory the nuclear installation of the operator liable is situated.

(c) Where jurisdiction would lie with the courts of more than one Contracting Party by virtue of paragraphs (a) or (b) of this article, jurisdiction shall lie,

(i) if the nuclear incident occurred partly outside the territory of any Contracting Party and partly in the territory of a single Contracting Party, with the courts of that Contracting Party; and

<sup>385</sup> See footnote 21 above.

<sup>386</sup> See footnote 19 above.



- (ii) in any other case, with the courts of the Contracting Party determined, at the request of a Contracting Party concerned, by the Tribunal referred to in article 17 as being the most closely related to the case in question.

571. Under article VIII of the 1963 Vienna Convention on Civil Liability for Nuclear Damage, the nature, form and extent of compensation, as well as its equitable distribution, are governed by the competent courts of the contracting parties:

#### *Article VIII*

Subject to the provisions of this Convention, the nature, form and extent of the compensation, as well as the equitable distribution thereof, shall be governed by the law of the competent court.

572. The Convention further provides, in article XI, that jurisdiction lies with the domestic courts of the contracting party in whose territory the nuclear incident occurs and that, if the incident occurs outside the territory of any contracting party, or if the place of the incident cannot be determined, the courts of the installation State of the operator liable have jurisdiction:

#### *Article XI*

1. Except as otherwise provided in this article, jurisdiction over actions under article II shall lie only with the courts of the Contracting Party within whose territory the nuclear incident occurred.

2. Where the nuclear incident occurred outside the territory of any Contracting Party, or where the place of the nuclear incident cannot be determined with certainty, jurisdiction over such actions shall lie with the courts of the Installation State of the operator liable.

3. Where under paragraph 1 or 2 of this article jurisdiction would lie with the courts of more than one Contracting Party, jurisdiction shall lie:

(a) if the nuclear incident occurred partly outside the territory of any Contracting Party, and partly within the territory of a single Contracting Party, with the courts of the latter; and

(b) in any other case, with the courts of that Contracting Party which is determined by agreement between the Contracting Parties whose courts would be competent under paragraph 1 or 2 of this article.

573. Article X of the 1962 Convention on the Liability of Operators of Nuclear Ships provides that action for compensation shall be brought either before the courts of the licensing State or before the courts of the contracting State or States in whose territory nuclear damage has been sustained:

#### *Article X*

1. Any action for compensation shall be brought, at the option of the claimant, either before the courts of the licensing State or before the courts of the Contracting State or States in whose territory nuclear damage has been sustained.

2. If the licensing State has been or might be called upon to ensure the payment of claims for compensation in accordance with paragraph 2 of article III of this Convention, it may intervene as party in any proceedings brought against the operator.

3. Any immunity from legal processes pursuant to rules of national or international law shall be waived with respect to duties or obligations arising under, or for the purpose of, this Convention. Nothing in this Convention shall make warships or other State-owned or State-operated ships on non-commercial service liable to arrest, attachment or seizure or confer jurisdiction in respect of warships on the courts of any foreign State.

574. Under the 1969 International Convention on Civil Liability for Oil Pollution Damage, only the courts of the contracting State or States in whose territory, including the territorial sea, the pollution damage has occurred, or preventive measures have been taken to prevent or minimize damage, are to entertain claims for

compensation. Thus each contracting State has to ensure that its courts possess the necessary jurisdiction. Once a fund has been established in accordance with the requirements of article V of the Convention, the courts of the State where the fund is established have *exclusive* jurisdiction to decide on all matters relating to its apportionment and distribution. Article IX of the Convention reads:

#### *Article IX*

1. Where an incident has caused pollution damage in the territory including the territorial sea of one or more Contracting States, or preventive measures have been taken to prevent or minimize pollution damage in such territory including the territorial sea, actions for compensation may only be brought in the courts of any such Contracting State or States. Reasonable notice of any such action shall be given to the defendant.

2. Each Contracting State shall ensure that its courts possess the necessary jurisdiction to entertain such actions for compensation.

3. After the fund has been constituted in accordance with article V the Courts of the State in which the fund is constituted shall be exclusively competent to determine all matters relating to the apportionment and distribution of the fund.

575. Under article XI of the Convention, the domestic courts also have jurisdiction in respect of ships owned by a contracting State and used for commercial purposes:

#### *Article XI*

2. With respect to ships owned by a Contracting State and used for commercial purposes, each State shall be subject to suit in the jurisdictions set forth in Article IX and shall waive all defences based on its status as a sovereign State.

576. Similarly, the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage provides that the domestic courts of the contracting parties are competent to decide on actions against the Fund, and that the contracting States must endow their courts with the necessary jurisdiction to entertain such actions. Article 7 of the Convention reads in part:

#### *Article 7*

1. Subject to the subsequent provisions of this article, any action against the Fund for compensation under article 4 or indemnification under article 5 of this Convention shall be brought only before a court competent under article IX of the Liability Convention [International Convention on Civil Liability for Oil Pollution Damage] in respect of actions against the owner who is or who would, but for the provisions of article III, paragraph 2, of that Convention, have been liable for pollution damage caused by the relevant incident.

2. Each Contracting State shall ensure that its courts possess the necessary jurisdiction to entertain such actions against the Fund as are referred to in paragraph 1.

3. Where an action for compensation for pollution damage has been brought before a court competent under article IX of the Liability Convention against the owner of a ship or his guarantor, such court shall have exclusive jurisdictional competence over any action against the Fund for compensation or indemnification under the provisions of article 4 or 5 of this Convention in respect of the same damage. However, where an action for compensation for pollution damage under the Liability Convention has been brought before a court in a State Party to the Liability Convention but not to this Convention, any action against the Fund under article 4 or under article 5, paragraph 1, of this Convention shall at the option of the claimant be brought either before a court of the State where the Fund has its headquarters or before any court of a State Party to this Convention competent under article IX of the Liability Convention.

4. Each Contracting State shall ensure that the Fund shall have the right to intervene as a party to any legal proceedings instituted in ac-



cordance with article IX of the Liability Convention before a competent court of that State against the owner of a ship or his guarantor.

577. The 1966 Additional Convention to the International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 25 February 1961 relating to the liability of the railway for death of and personal injury to passengers provides that, unless otherwise agreed upon by States, or stipulated in the licence of the railway, the domestic courts of the State in whose territory the accident to the passenger occurs are competent to entertain actions for compensation. Article 15 of the Convention reads:

*Article 15. Jurisdiction*

Actions brought under this Convention may only be instituted in the competent court of the State on whose territory the accident to the passenger occurred, unless otherwise provided in agreements between States, or in any licence or other document authorizing the operation of the railway concerned.

578. Under the 1974 Convention on the Protection of the Environment between Denmark, Finland, Norway and Sweden, the nuisance which an activity entails or may entail in the territory of another contracting State is equated with a nuisance in the State where the activity is carried out. Thus any person who is or may be affected by such a nuisance may bring a claim before the court or administrative authority of that State for compensation. The rules on compensation must not be less favourable to the injured party than those in the State where the activity is carried out. Indeed, the Convention provides for *equal access* to the competent authorities and for *equal treatment* of the injured parties, whether local or foreign. The relevant articles of the Convention read:

*Article 2*

In considering the permissibility of environmentally harmful activities, the nuisance which such activities entail or may entail in another Contracting State shall be equated with a nuisance in the State where the activities are carried out.

*Article 3*

Any person who is affected or may be affected by a nuisance caused by environmentally harmful activities in another Contracting State shall have the right to bring before the appropriate court or administrative authority of that State the question of the permissibility of such activities, including the question of measures to prevent damage, and to appeal against the decision of the court or the administrative authority to the same extent and on the same terms as a legal entity of the State in which the activities are being carried out.

The provisions of the first paragraph of this article shall be equally applicable in the case of proceedings concerning compensation for damage caused by environmentally harmful activities. The question of compensation shall not be judged by rules which are less favourable to the injured party than the rules of compensation of the State in which the activities are being carried out.

*Protocol*

The right established in article 3 for anyone who suffers injury as a result of environmentally harmful activities in a neighbouring State to institute proceedings for compensation before a court or administrative authority of that State shall, in principle, be regarded as including the right to demand the purchase of his real property.

579. Under article 11 of the 1976 Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources, the competent authorities to decide on ques-

tions of liability and compensation are the national courts of either the controlling State or the State in whose territory the damage has occurred. Each contracting party is required to ensure that its courts possess the necessary jurisdiction to entertain actions for compensation. It appears, under the Convention, that the national courts are to apply both the Convention and their domestic law, the former for questions of liability and compensation and the latter for evidentiary and procedural matters. However, only the courts of a State party in which a fund has been constituted are competent to determine all matters relating to the apportionment and distribution of that fund. Article 11 of the Convention reads:

*Article 11*

1. Actions for compensation under this convention may be brought only in the courts of any State Party where pollution damage was suffered as a result of the incident or in the courts of the controlling State. For the purpose of determining where the damage was suffered, damage suffered in an area in which, in accordance with international law, a State has sovereign rights over natural resources shall be deemed to have been suffered in that State.

2. Each State Party shall ensure that its courts possess the necessary jurisdiction to entertain such actions for compensation.

3. After the fund has been constituted in accordance with article 6, the courts of the State Party in which the fund is constituted shall be exclusively competent to determine all matters relating to the apportionment and distribution of the fund.

Furthermore, if a well has been abandoned in circumstances other than those provided in the Convention, the liability of the operator is governed by the applicable domestic law. The relevant passage of article 3, paragraph 4, reads:

... Where a well has been abandoned in other circumstances, the liability of the operator shall be governed by the applicable national law.

580. Under article 232 of the 1982 United Nations Convention on the Law of the Sea, States are liable for damage or loss attributable to them arising from measures taken in accordance with section 6 of part XII, relating to the protection and preservation of the marine environment, when such measures are *unlawful* or *exceed those reasonably required*. Accordingly, States are required to endow their courts with appropriate jurisdiction to deal with actions brought in respect of such loss or damage (see para. 246 above).

*(b) Bilateral agreements*

581. Some bilateral agreements recognize the competence of national courts to decide on questions of liability and compensation. The 1929 Convention between Norway and Sweden relating to their frontier waters<sup>387</sup> provides, in article 6, that the law of the country in whose territory *the damage has occurred* shall govern the question of compensation (see para. 521 above). However, the article does not indicate which court is competent. It seems that it is the courts of the country in which the injury has occurred that are competent to decide on compensation.

582. The Agreements concluded by the United States of America with Italy and with the Netherlands provide that the authorities and local courts of the host States

<sup>387</sup> See footnote 36 above.

shall be competent to decide on the liability of the United States in case of injuries caused by the United States nuclear ship, the N.S. *Savannah*, in their territories. The relevant paragraph of the 1965 Agreement between the United States and Italy concerning liability<sup>388</sup> reads:

. . . Within the \$500 million limitation in such public laws [Public Laws 85-256 and 85-602] the operator of the ship shall be subject to the jurisdiction of the *Italian court*\* . . .

583. Article 5 of the 1963 Agreement between the Netherlands and the United States on public liability<sup>389</sup> reads:

*Article 5*

The United States agrees to submit to proceedings before any *competent court of the Netherlands*\* or before any other body established under Netherlands law for the purpose of considering and determining liability for damage as described in article 1.

Article 1 of the same Agreement provides that the Netherlands courts or a commission established in accordance with Netherlands law shall determine United States liability for certain nuclear damage (see para. 460 above). It is further provided, in article 2, that the United States shall indemnify any person who is held liable under the law of a country other than the Netherlands for damage caused in Netherlands territory:

*Article 2*

The United States shall indemnify any person who on account of any act or omission committed on Netherlands territory is held liable for public liability under the law of a country other than the Netherlands for damage as described in article 1.

(c) *Judicial decisions and State practice  
other than agreements*

584. Judicial decisions and official correspondence contain no indication concerning the competence of local courts and authorities to rule on questions of liability and compensation, except possibly on the distribution of lump sum payments. However, press reports indicate the desire of the United States Government to settle claims against the United States arising out of the nuclear tests in the *Marshall Islands*; apparently suits seeking over \$4 billion have already been filed in United States courts and others are in progress.<sup>390</sup> Islanders from Bikini, for example, whose largest island had remained radioactive two decades after the last test, were seeking \$450 million. It appears that settlements on compensation have in most cases been reached by negotiation between the authorities of the Governments concerned.

2. INTERNATIONAL COURTS, ARBITRAL TRIBUNALS  
AND JOINT COMMISSIONS

(a) *Multilateral agreements*

585. In the case of activities not exclusively of a commercial nature, in which the acting entities are primarily States, the competent organs for deciding on questions of liability and compensation are generally arbitral

tribunals. The 1972 Convention on International Liability for Damage Caused by Space Objects provides that, if the parties fail to reach agreement through diplomatic negotiations, the question of compensation shall be submitted to arbitration. Accordingly, a claims commission composed of three members, one appointed by the claimant State, one appointed by the launching State and a chairman, is to be established upon the request of either party. The relevant articles of the Convention read:

*Article VIII*

1. A State which suffers damage, or whose natural or juridical persons suffer damage, may present to a launching State a claim for compensation for such damage.

2. If the State of nationality has not presented a claim, another State may, in respect of damage sustained in its territory by any natural or juridical person, present a claim to a launching State.

3. If neither the State of nationality nor the State in whose territory the damage was sustained has presented a claim or notified its intention of presenting a claim, another State may, in respect of damage sustained by its permanent residents, present a claim to a launching State.

*Article IX*

A claim for compensation for damage shall be presented to a launching State through diplomatic channels. If a State does not maintain diplomatic relations with the launching State concerned, it may request another State to present its claim to that launching State or otherwise represent its interests under this Convention. It may also present its claim through the Secretary-General of the United Nations, provided the claimant State and the launching State are both Members of the United Nations.

*Article XI*

1. Presentation of a claim to a launching State for compensation for damage under this Convention shall not require the prior exhaustion of any local remedies which may be available to a claimant State or to natural or juridical persons it represents.

2. Nothing in this Convention shall prevent a State, or natural or juridical persons it might represent, from pursuing a claim in the courts or administrative tribunals or agencies of a launching State. A State shall not, however, be entitled to present a claim under this Convention in respect of the same damage for which a claim is being pursued in the courts or administrative tribunals or agencies of a launching State or under another international agreement which is binding on the States concerned.

. . .

*Article XIV*

If no settlement of a claim is arrived at through diplomatic negotiations as provided for in article IX, within one year from the date on which the claimant State notifies the launching State that it has submitted the documentation of its claim, the parties concerned shall establish a Claims Commission at the request of either party.

*Article XV*

1. The Claims Commission shall be composed of three members: one appointed by the claimant State, one appointed by the launching State and the third member, the chairman, to be chosen by both parties jointly. Each party shall make its appointment within two months of the request for the establishment of the Claims Commission.

2. If no agreement is reached on the choice of the chairman within four months of the request for the establishment of the Commission, either party may request the Secretary-General of the United Nations to appoint the chairman within a further period of two months.

*Article XVI*

1. If one of the parties does not make its appointment within the stipulated period, the chairman shall, at the request of the other party, constitute a single-member Claims Commission.

2. Any vacancy which may arise in the Commission for whatever reason shall be filled by the same procedure adopted for the original appointment.

<sup>388</sup> See footnote 20 above.

<sup>389</sup> See footnote 22 above.

<sup>390</sup> *International Herald Tribune*, 15 June 1982, p. 5, col. 2.

3. The Commission shall determine its own procedure.
4. The Commission shall determine the place or places where it shall sit and all other administrative matters.
5. Except in the case of decisions and awards by a single-member Commission, all decisions and awards of the Commission shall be by majority vote.

#### Article XVIII

The Claims Commission shall decide the merits of the claim for compensation and determine the amount of compensation payable, if any.

586. In part XV of the 1982 United Nations Convention on the Law of the Sea, the parties are encouraged and requested to settle their disputes by peaceful means. The Convention provides for a wide range of possible modes of settlement of disputes, as well as for an elaborate system according to which the competent organs for deciding on a dispute, depending upon the *nature of the dispute*, are the International Tribunal for the Law of the Sea, or the International Court of Justice, or an arbitral tribunal. Articles 278 to 285 set out the modes of settlement compatible with Article 33 of the Charter. The States parties are required in the first place to settle their disputes by peaceful means (art. 279). They may agree on a peaceful means of their choice to settle disputes concerning the interpretation and application of the Convention (art. 280). Disputes may also be settled in the framework of regional or other agreements in force between the parties, at the option of any party to the dispute (art. 282). The States parties are required to proceed promptly to an exchange of views for the purpose of agreeing on a suitable mode of peaceful settlement (art. 283). *Conciliation* is also provided for in article 284, with its procedure (annex V, sect. 1). The parties may agree on a different procedure for conciliation. If the parties cannot agree on a procedure of their choice, the Convention lays down compulsory procedures leading to binding decisions, in which case the competent forums are the International Court of Justice, the International Tribunal for the Law of the Sea and *ad hoc* tribunals (arts. 286-299). Under article 295 of the Convention, the parties, before submitting their disputes to this compulsory procedure, *must have exhausted local remedies where this is required by international law*. This article may be interpreted as referring to the exhaustion of the remedies available in domestic and administrative courts, as well as negotiation with the competent authorities of the acting State. The provisions of the Convention on the settlement of disputes are as follows:

#### Part XV. Settlement of disputes

##### SECTION 1. GENERAL PROVISIONS

#### Article 279. *Obligation to settle disputes by peaceful means*

States Parties shall settle any dispute between them concerning the interpretation or application of this Convention by peaceful means in accordance with Article 2, paragraph 3, of the Charter of the United Nations and, to this end, shall seek a solution by the means indicated in Article 33, paragraph 1, of the Charter.

#### Article 280. *Settlement of disputes by any peaceful means chosen by the parties*

Nothing in this Part impairs the right of any States Parties to agree at any time to settle a dispute between them concerning the interpretation or application of this Convention by any peaceful means of their own choice.

#### Article 281. *Procedure where no settlement has been reached by the parties*

1. If the States Parties which are parties to a dispute concerning the interpretation or application of this Convention have agreed to seek settlement of the dispute by a peaceful means of their own choice, the procedures provided for in this Part apply only where no settlement has been reached by recourse to such means and the agreement between the parties does not exclude any further procedure.
2. If the parties have also agreed on a time-limit, paragraph 1 applies only upon the expiration of that time-limit.

#### Article 282. *Obligations under general, regional or bilateral agreements*

If the States Parties which are parties to a dispute concerning the interpretation or application of this Convention have agreed, through a general, regional or bilateral agreement or otherwise, that such dispute shall, at the request of any party to the dispute, be submitted to a procedure that entails a binding decision, that procedure shall apply in lieu of the procedures provided for in this Part, unless the parties to the dispute otherwise agree.

#### Article 283. *Obligation to exchange views*

1. When a dispute arises between States Parties concerning the interpretation or application of this Convention, the parties to the dispute shall proceed expeditiously to an exchange of views regarding its settlement by negotiation or other peaceful means.
2. The parties shall also proceed expeditiously to an exchange of views where a procedure for the settlement of such a dispute has been terminated without a settlement or where a settlement has been reached and the circumstances require consultation regarding the manner of implementing the settlement.

#### Article 284. *Conciliation*

1. A State Party which is a party to a dispute concerning the interpretation or application of this Convention may invite the other party or parties to submit the dispute to conciliation in accordance with the procedure under annex V, section 1, or another conciliation procedure.
2. If the invitation is accepted and if the parties agree upon the conciliation procedure to be applied, any party may submit the dispute to that procedure.
3. If the invitation is not accepted or the parties do not agree upon the procedure, the conciliation proceedings shall be deemed to be terminated.
4. Unless the parties otherwise agree, when a dispute has been submitted to conciliation, the proceedings may be terminated only in accordance with the agreed conciliation procedure.

#### Article 285. *Application of this section to disputes submitted pursuant to Part XI*

This section applies to any dispute which pursuant to Part XI, section 5, is to be settled in accordance with procedures provided for in this Part. If an entity other than a State Party is a party to such a dispute, this section applies *mutatis mutandis*.

### SECTION 2. COMPULSORY PROCEDURES ENTAILING BINDING DECISIONS

#### Article 286. *Application of procedures under this section*

Subject to section 3, any dispute concerning the interpretation or application of this Convention shall, where no settlement has been reached by recourse to section 1, be submitted at the request of any party to the dispute to the court or tribunal having jurisdiction under this section.

#### Article 287. *Choice of procedure*

1. When signing, ratifying or acceding to this Convention or at any time thereafter, a State shall be free to choose, by means of a written declaration, one or more of the following means for the settlement of disputes concerning the interpretation or application of this Convention:
  - (a) the International Tribunal for the Law of the Sea established in accordance with annex VI;
  - (b) the International Court of Justice;
  - (c) an arbitral tribunal constituted in accordance with annex VII;

(d) a special arbitral tribunal constituted in accordance with annex VIII for one or more of the categories of disputes specified therein.

2. A declaration made under paragraph 1 shall not affect or be affected by the obligation of a State Party to accept the jurisdiction of the Sea-Bed Disputes Chamber of the International Tribunal for the Law of the Sea to the extent and in the manner provided for in Part XI, section 5.

3. A State Party, which is a party to a dispute not covered by a declaration in force, shall be deemed to have accepted arbitration in accordance with annex VII.

4. If the parties to a dispute have accepted the same procedure for the settlement of the dispute, it may be submitted only to that procedure, unless the parties otherwise agree.

5. If the parties to a dispute have not accepted the same procedure for the settlement of the dispute, it may be submitted only to arbitration in accordance with annex VII, unless the parties otherwise agree.

6. A declaration made under paragraph 1 shall remain in force until three months after notice of revocation has been deposited with the Secretary-General of the United Nations.

7. A new declaration, a notice of revocation or the expiry of a declaration does not in any way affect proceedings pending before a court or tribunal having jurisdiction under this article, unless the parties otherwise agree.

8. Declarations and notices referred to in this article shall be deposited with the Secretary-General of the United Nations, who shall transmit copies thereof to the States Parties.

#### Article 288. Jurisdiction

1. A court or tribunal referred to in article 287 shall have jurisdiction over any dispute concerning the interpretation or application of this Convention which is submitted to it in accordance with this Part.

2. A court or tribunal referred to in article 287 shall also have jurisdiction over any dispute concerning the interpretation or application of an international agreement related to the purposes of this Convention, which is submitted to it in accordance with the agreement.

3. The Sea-Bed Disputes Chamber of the International Tribunal for the Law of the Sea established in accordance with annex VI, and any other chamber or arbitral tribunal referred to in Part XI, section 5, shall have jurisdiction in any matter which is submitted to it in accordance therewith.

4. In the event of a dispute as to whether a court or tribunal has jurisdiction, the matter shall be settled by decision of that court or tribunal.

#### Article 289. Experts

In any dispute involving scientific or technical matters, a court or tribunal exercising jurisdiction under this section may, at the request of a party or *proprio motu*, select in consultation with the parties no fewer than two scientific or technical experts chosen preferably from the relevant list prepared in accordance with annex VIII, article 2, to sit with the court or tribunal but without the right to vote.

#### Article 290. Provisional measures

1. If a dispute has been duly submitted to a court or tribunal which considers that *prima facie* it has jurisdiction under this Part or Part XI, section 5, the court or tribunal may prescribe any provisional measures which it considers appropriate under the circumstances to preserve the respective rights of the parties to the dispute or to prevent serious harm to the marine environment, pending the final decision.

2. Provisional measures may be modified or revoked as soon as the circumstances justifying them have changed or ceased to exist.

3. Provisional measures may be prescribed, modified or revoked under this article only at the request of a party to the dispute and after the parties have been given an opportunity to be heard.

4. The court or tribunal shall forthwith give notice to the parties to the dispute, and to such other States Parties as it considers appropriate, of the prescription, modification or revocation of provisional measures.

5. Pending the constitution of an arbitral tribunal to which a dispute is being submitted under this section, any court or tribunal agreed upon by the parties or, failing such agreement within two weeks from the date of the request for provisional measures, the International Tribunal for the Law of the Sea or, with respect to activities in the Area, the Sea-Bed Disputes Chamber, may prescribe, modify or

revoke provisional measures in accordance with this article if it considers that *prima facie* the tribunal which is to be constituted would have jurisdiction and that the urgency of the situation so requires. Once constituted, the tribunal to which the dispute has been submitted may modify, revoke or affirm those provisional measures, acting in conformity with paragraphs 1 to 4.

6. The parties to the dispute shall comply promptly with any provisional measures prescribed under this article.

#### Article 291. Access

1. All the dispute settlement procedures specified in this Part shall be open to States Parties.

2. The dispute settlement procedures specified in this Part shall be open to entities other than States Parties only as specifically provided for in this Convention.

#### Article 292. Prompt release of vessels and crews

1. Where the authorities of a State Party have detained a vessel flying the flag of another State Party and it is alleged that the detaining State has not complied with the provisions of this Convention for the prompt release of the vessel or its crew upon the posting of a reasonable bond or other financial security, the question of release from detention may be submitted to any court or tribunal agreed upon by the parties or, failing such agreement within 10 days from the time of detention, to a court or tribunal accepted by the detaining State under article 287 or to the International Tribunal for the Law of the Sea, unless the parties otherwise agree.

2. The application for release may be made only by or on behalf of the flag State of the vessel.

3. The court or tribunal shall deal without delay with the application for release and shall deal only with the question of release, without prejudice to the merits of any case before the appropriate domestic forum against the vessel, its owner or its crew. The authorities of the detaining State remain competent to release the vessel or its crew at any time.

4. Upon the posting of the bond or other financial security determined by the court or tribunal, the authorities of the detaining State shall comply promptly with the decision of the court or tribunal concerning the release of the vessel or its crew.

#### Article 293. Applicable law

1. A court or tribunal having jurisdiction under this section shall apply this Convention and other rules of international law not incompatible with this Convention.

2. Paragraph 1 does not prejudice the power of the court or tribunal having jurisdiction under this section to decide a case *ex aequo et bono*, if the parties so agree.

#### Article 294. Preliminary proceedings

1. A court or tribunal provided for in article 287 to which an application is made in respect of a dispute referred to in article 297 shall determine at the request of a party, or may determine *proprio motu*, whether the claim constitutes an abuse of legal process or whether *prima facie* it is well founded. If the court or tribunal determines that the claim constitutes an abuse of legal process or is *prima facie* unfounded, it shall take no further action in the case.

2. Upon receipt of the application, the court or tribunal shall immediately notify the other party or parties of the application, and shall fix a reasonable time-limit within which they may request it to make a determination in accordance with paragraph 1.

3. Nothing in this article affects the right of any party to a dispute to make preliminary objections in accordance with the applicable rules of procedure.

#### Article 295. Exhaustion of local remedies

Any dispute between States Parties concerning the interpretation or application of this Convention may be submitted to the procedures provided for in this section only after local remedies have been exhausted where this is required by international law.

#### Article 296. Finality and binding force of decisions

1. Any decision rendered by a court or tribunal having jurisdiction under this section shall be final and shall be complied with by all the parties to the dispute.

2. Any such decision shall have no binding force except between the parties and in respect of that particular dispute.

SECTION 3. LIMITATIONS AND EXCEPTIONS TO  
APPLICABILITY OF SECTION 2

*Article 297. Limitations on applicability of section 2*

1. Disputes concerning the interpretation or application of this Convention with regard to the exercise by a coastal State of its sovereign rights or jurisdiction provided for in this Convention shall be subject to the procedures provided for in section 2 in the following cases:

(a) when it is alleged that a coastal State has acted in contravention of the provisions of this Convention in regard to the freedoms and rights of navigation, overflight or the laying of submarine cables and pipelines, or in regard to other internationally lawful uses of the sea specified in article 58;

(b) when it is alleged that a State in exercising the aforementioned freedoms, rights or uses has acted in contravention of this Convention or of laws or regulations adopted by the coastal State in conformity with this Convention and other rules of international law not incompatible with this Convention; or

(c) when it is alleged that a coastal State has acted in contravention of specified international rules and standards for the protection and preservation of the marine environment which are applicable to the coastal State and which have been established by this Convention or through a competent international organization or diplomatic conference in accordance with this Convention.

2. (a) Disputes concerning the interpretation or application of the provisions of this Convention with regard to marine scientific research shall be settled in accordance with section 2, except that the coastal State shall not be obliged to accept the submission to such settlement of any dispute arising out of:

(i) the exercise by the coastal State of a right or discretion in accordance with article 246; or

(ii) a decision by the coastal State to order suspension or cessation of a research project in accordance with article 253.

(b) A dispute arising from an allegation by the researching State that with respect to a specific project the coastal State is not exercising its rights under articles 246 and 253 in a manner compatible with this Convention shall be submitted, at the request of either party, to conciliation under annex V, section 2, provided that the conciliation commission shall not call in question the exercise by the coastal State of its discretion to designate specific areas as referred to in article 246, paragraph 6, or of its discretion to withhold consent in accordance with article 246, paragraph 5.

3. (a) Disputes concerning the interpretation or application of the provisions of this Convention with regard to fisheries shall be settled in accordance with section 2, except that the coastal State shall not be obliged to accept the submission to such settlement of any dispute relating to its sovereign rights with respect to the living resources in the exclusive economic zone or their exercise, including its discretionary powers for determining the allowable catch, its harvesting capacity, the allocation of surpluses to other States and the terms and conditions established in its conservation and management laws and regulations.

(b) Where no settlement has been reached by recourse to section 1 of this Part, a dispute shall be submitted to conciliation under annex V, section 2, at the request of any party to the dispute, when it is alleged that:

(i) a coastal State has manifestly failed to comply with its obligations to ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not seriously endangered;

(ii) a coastal State has arbitrarily refused to determine, at the request of another State, the allowable catch and its capacity to harvest living resources with respect to stocks which that other State is interested in fishing; or

(iii) a coastal State has arbitrarily refused to allocate to any State, under articles 62, 69 and 70 and under the terms and conditions established by the coastal State consistent with this Convention, the whole or part of the surplus it has declared to exist.

(c) In no case shall the conciliation commission substitute its discretion for that of the coastal State.

(d) The report of the conciliation commission shall be communicated to the appropriate international organizations.

(e) In negotiating agreements pursuant to articles 69 and 70, States Parties, unless they otherwise agree, shall include a clause on measures

which they shall take in order to minimize the possibility of a disagreement concerning the interpretation or application of the agreement, and on how they should proceed if a disagreement nevertheless arises.

*Article 298. Optional exceptions to applicability of section 2*

1. When signing, ratifying or acceding to this Convention or at any time thereafter, a State may, without prejudice to the obligations arising under section 1, declare in writing that it does not accept any one or more of the procedures provided for in section 2 with respect to one or more of the following categories of disputes:

(a) (i) disputes concerning the interpretation or application of articles 15, 74 and 83 relating to sea boundary delimitations, or those involving historic bays or titles, provided that a State having made such a declaration shall, when such a dispute arises subsequent to the entry into force of this Convention and where no agreement within a reasonable period of time is reached in negotiations between the parties, at the request of any party to the dispute, accept submission of the matter to conciliation under annex V, section 2; and provided further that any dispute that necessarily involves the concurrent consideration of any unsettled dispute concerning sovereignty or other rights over continental or insular land territory shall be excluded from such submission;

(ii) after the conciliation commission has presented its report, which shall state the reasons on which it is based, the parties shall negotiate an agreement on the basis of that report; if these negotiations do not result in an agreement, the parties, or to any such dispute which is to be settled in accordance with a bilateral or multilateral agreement binding upon those parties;

(iii) this subparagraph does not apply to any sea boundary dispute finally settled by an arrangement between the parties, or to any such dispute which is to be settled in accordance with a bilateral or multilateral agreement binding upon those parties;

(b) disputes concerning military activities, including military activities by government vessels and aircraft engaged in non-commercial service, and disputes concerning law enforcement activities in regard to the exercise of sovereign rights or jurisdiction excluded from the jurisdiction of a court or tribunal under article 297, paragraph 2 or 3;

(c) disputes in respect of which the Security Council of the United Nations is exercising the functions assigned to it by the Charter of the United Nations, unless the Security Council decides to remove the matter from its agenda or calls upon the parties to settle it by the means provided for in this Convention.

2. A State Party which has made a declaration under paragraph 1 may at any time withdraw it, or agree to submit a dispute excluded by such declaration to any procedure specified in this Convention.

3. A State Party which has made a declaration under paragraph 1 shall not be entitled to submit any dispute falling within the excepted category of disputes to any procedure in this Convention as against another State Party, without the consent of that party.

4. If one of the States Parties has made a declaration under paragraph 1 (a), any other State Party may submit any dispute falling within an excepted category against the declarant party to the procedure specified in such declaration.

5. A new declaration, or the withdrawal of a declaration, does not in any way affect proceedings pending before a court or tribunal in accordance with this article, unless the parties otherwise agree.

6. Declarations and notices of withdrawal of declarations under this article shall be deposited with the Secretary-General of the United Nations, who shall transmit copies thereof to the States Parties.

*Article 299. Right of the parties to agree upon a procedure*

1. A dispute excluded under article 297 or excepted by a declaration made under article 298 from the dispute settlement procedures provided for in section 2 may be submitted to such procedures only by agreement of the parties to the dispute.

2. Nothing in this section impairs the right of the parties to the dispute to agree to some other procedure for the settlement of such dispute or to reach an amicable settlement.

(b) *Bilateral agreements*

587. Under a number of bilateral agreements, separate bodies are set up as authorities competent to decide on questions of compensation. Under the 1971 Agreement between Finland and Sweden concerning frontier rivers, the Frontier River Commission is competent to take decisions on questions of compensation arising from activities within the scope of the Agreement. Article 2 of chapter 7 reads:

*Article 2*

The Frontier River Commission may also take decisions otherwise than in connexion with applications for permission on questions of compensation arising from measures falling within the scope of this Agreement.

Compensation for damage and inconvenience resulting from the measures referred to in chapter 3, article 21, shall, in the absence of agreement, be fixed by the Frontier River Commission.

Article 3 of the same chapter states that the applicable law is that of the country in whose territory the injury has taken place:

*Article 3*

Save as otherwise provided in this Agreement, the law of the State in which the property used is situated or in which loss, damage or inconvenience otherwise occurs shall apply in respect of the grounds for compensation, the right of the owner of property used or damaged to demand payment and the manner and time of payment of compensation.

588. The 1974 Agreement between the United States of America and Canada relating to certain rocket launches<sup>391</sup> provides that, if the claims arising from those launches are not settled through negotiation, the two Governments may establish a Claims Commission, as provided for in article XV of the Convention on International Liability for Damage Caused by Space Objects. The relevant paragraph of the Agreement (note I) reads:

In the event that a claim arising out of these launches is not settled expeditiously in a mutually acceptable manner, the Government of the United States and the Government of Canada shall give consideration to the establishment of a *Claims Commission*\* such as that provided for in article XV of the Convention on International Liability for Damage Caused by Space Objects with a view to arriving at a prompt and equitable settlement.

(c) *Judicial decisions and State practice other than agreements*

589. Most judicial decisions in this matter have been rendered by the Permanent Court of International Justice, by the International Court of Justice or by arbitral tribunals on the basis of agreement between the parties or of a prior treaty obligation. At least one arbitral tribunal, that called upon to adjudicate in the *Trail Smelter* case, provided in its award for an arbitration mechanism in the event that the States parties were unable to agree on the modification or amendment of the régime proposed by one side (see para. 296 above).

## 3. APPLICABLE LAW

(a) *Multilateral agreements*

590. International law is applicable in disputes arising from activities conducted solely by States. Domestic

laws, on the other hand, are applicable in disputes arising from activities mainly of a commercial nature, which are substantially dominated by private entities. The 1972 Convention on International Liability for Damage Caused by Space Objects regulates space activities at present controlled by States and provides that *international law and the principles of justice and equity* are the applicable law in accordance with which compensation and such reparation in respect of the damage as will restore the person, natural or juridical, State or international organization, shall be accorded. Article XII of the Convention reads:

*Article XII*

The compensation which the launching State shall be liable to pay for damage under this Convention shall be determined in accordance with international law and the principles of justice and equity, in order to provide such reparation in respect of the damage as will restore the person, natural or juridical, State or international organization on whose behalf the claim is presented to the condition which would have existed if the damage had not occurred.

591. Similarly, article 293 of the 1982 United Nations Convention on the Law of the Sea provides that, when a court (that is, the International Court of Justice or the International Tribunal for the Law of the Sea) or a tribunal having jurisdiction, in accordance with section 2 of part XV of the Convention, to rule in a dispute concerning the application or interpretation of the Convention, it shall *apply the provisions of the Convention and other rules of international law* not incompatible with the Convention. However, if the parties to a dispute agree, the court or tribunal can adjudicate *ex aequo et bono*. (See para. 586 above for the text of section 2 of part XV, including article 293.)

592. On the other hand, the 1966 Additional Convention to the International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 26 February 1961 relating to the liability of the railway for death of and personal injury to passengers, which regulates an essentially commercial activity, provides in article 6, paragraph 2, for the application of *national law*:

*Article 6. Form and limit of damages in case of death of or personal injury to the passenger*

...

2. The amount of damages to be awarded under paragraph 1 shall be determined in accordance with national law. However, in the event of the national law providing for a maximum limit of less than 200,000 francs, the limit per passenger shall, for the purposes of this Convention, be fixed at 200,000 francs in the form of a lump sum or of an annuity corresponding to that amount.

593. Similarly, the 1962 Convention on the Liability of Operators of Nuclear Ships provides in article VI for the application of *national law*:

*Article VI*

Where provisions of national health insurance, social insurance, social security, workmen's compensation or occupational disease compensation systems include compensation for nuclear damage, rights of beneficiaries under such systems and rights of subrogation, or of recourse against the operator, by virtue of such systems, shall be determined by the law of the Contracting State having established such systems. However, if the law of such Contracting State allows claims of beneficiaries of such systems and such rights of subrogation and recourse to be brought against the operator in conformity with the terms of this Convention, this shall not result in the liability of the operator exceeding the amount specified in paragraph 1 of article III.

<sup>391</sup> See footnote 84 above.

594. Under article 5, paragraph 5, of the 1957 International Convention relating to the Limitation of the Liability of Owners of Seagoing Ships, claims for liability and compensation are to be brought before the appropriate national courts of the contracting parties and the *national law* is applicable as far as the *procedure* of bringing such claims is concerned, and also as to the *time limits* within which such actions shall be brought or prosecuted. The provision reads:

5. Questions of procedure relating to actions brought under the provisions of this Convention and also the time limit within which such actions shall be brought or prosecuted shall be decided in accordance with the national law of the Contracting State in which the action takes place.

The Convention provides further, in article 1, paragraph 6, that the *national law* shall determine the question upon whom lies the burden of proving whether or not the accident causing the injury resulted from a fault (see para. 562 above).

#### (b) *Bilateral agreements*

595. In bilateral agreements, the law applicable in a dispute is contained in the provisions of these agreements themselves. In a few agreements, however, the domestic law of one of the parties is recognized as the applicable law. For example, article 6 of the 1929 Convention between Norway and Sweden concerning frontier waters<sup>392</sup> provides that the question of compensation shall be governed by the law of the country *in whose territory the damage has occurred* (see para. 521 above).

596. In agreements concluded with Italy and with the Netherlands concerning its nuclear ship, the N.S. *Savannah*, the United States of America recognized the competence of the Italian and Netherlands courts to adjudicate on the liability of the United States for any injuries that the ship might cause in the territories of those two countries. Article 1 of the 1963 Agreement concluded with the Netherlands<sup>393</sup> provides for the application of the existing *principles of law* (see para. 460 above).

597. Article VIII of the 1964 Agreement concluded with Italy<sup>394</sup> recognizes the competence of the Italian courts and the applicability of Italian law (see para. 458 above).

598. By the 1965 Agreement with Italy,<sup>395</sup> which nullified the 1964 Agreement following the operation of the N.S. *Savannah* by a private entity, the United States recognized the competence of the Italian courts to adjudicate in matters of liability for damage, but without indicating what would be the applicable law. The new Agreement provides as follows:

In view of the inapplicability of the Agreement of November 23, 1964 to the new situation, the Embassy proposes that the following shall constitute the agreement between the two Governments in the new situation.

Within the limitation of liability set by United States Public Law 85-256 (Annex A), as amended by 85-602 (Annex B) in any legal action

or proceeding brought *in personam* against the operator to the N.S. *Savannah* in an Italian court, the United States Government will provide compensation by way of indemnity for any legal liability which an Italian court may find for any damage to people or goods deriving from a nuclear incident in connection with, arising out of or resulting from the operation, repair, maintenance or use of the N.S. *Savannah*, in which the N.S. *Savannah* may be involved within Italian territorial waters, or outside of them on a voyage to or from Italian ports if damage is caused in Italy or on ships of Italian registry. Within the \$500 million limitation in such public laws, the operator of the ship shall be subject to the jurisdiction of the Italian court and shall not invoke the provisions of Italian law or any other law relating to the limitation of shipowner's liability.

599. The 1965 Agreement provides that the operator of the ship shall not invoke the provisions of Italian law to limit its liability. This language, together with the reference to the jurisdiction of Italian courts, may be taken to imply that Italian law is applicable in the same way as in the 1964 Agreement. In the two above-mentioned agreements, the limitation of liability set by United States Public Law 85-256, as amended by Public Law 85-602, is also applicable. Similarly, the Agreement concluded with the Netherlands in 1963 on public liability for damage provides in article 6 that the terms "persons indemnified", "public liability" and "nuclear incident" have the same meaning as in the definitions of those terms in section 11 of the United States Atomic Energy Act of 1954, as amended:

#### *Article 6*

As used in this Agreement and its annex, the terms "persons indemnified", "public liability" and "nuclear incident" have the same meaning as in the definitions of those terms found in Section 11 of the United States Atomic Energy Act of 1954, as amended (U.S. Code, Title 42, Section 2014).

600. Hence it appears that, in addition to the provisions of treaties and of the domestic laws of both "potentially injured States"—Italy and the Netherlands—certain laws of the acting State, the United States, are also applicable. Under article 1 of the Agreement with the Netherlands, the *principles of law* are also relevant and applicable (see para. 460 above) and, under article 2, the United States will be liable for injuries caused to any person in Netherlands territorial waters under *the law of a country* other than the Netherlands (see para. 583 above). The legislation of a third State may thus also be applicable, although it is unclear what court would be competent to apply that legislation.

601. Under the Agreement concluded with Ireland in 1964,<sup>396</sup> again in connection with the N.S. *Savannah*, the United States submits to the jurisdiction of Irish courts for injuries its ship may cause in Irish territory or outside that territory during a voyage to or from Ireland. The Agreement provides for the applicability of the limitation on liability prescribed by United States law, of the terms of the Agreement itself, as well as of Irish domestic law.

#### (c) *Judicial decisions and State practice other than agreements*

602. Under Article 38 of the Statute of the Permanent Court of International Justice as well as of the International Court of Justice, the function of the Court is to

<sup>392</sup> See footnote 36 above.

<sup>393</sup> See footnote 22 above.

<sup>394</sup> See footnote 20 above.

<sup>395</sup> *Ibid.*

<sup>396</sup> See footnote 21 above.



decide such disputes as are submitted to it in accordance with international law, the sources of which are:

- (a) international conventions, whether general or particular, establishing rules expressly recognized by the contesting States;
- (b) international custom, as evidence of a general practice accepted as law;
- (c) the general principles of law recognized by civilized nations;
- (d) subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

603. Under this article, if the parties agree, the Court has the competence to decide their case *ex aequo et bono*. It is within this legal framework that international courts have adjudicated on issues of extra-territorial injuries and liability.

604. The decisions of arbitral tribunals have also been based on the treaty obligations of the contracting parties, on international law, and occasionally on the domestic law of States. In the *Trail Smelter* case, the tribunal examined the decisions of the United States Supreme Court as well as other sources of law and reached the conclusion that, "under the principles of international law, as well as of the *law of the United States*,\* no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another . . .".<sup>397</sup>

605. In their official correspondence, States have invoked international law and the general principles of law, as well as treaty obligations. Canada's claim for damages for the crash of the Soviet satellite, *Cosmos 954*, was based on treaty obligations as well as the "general principles of law recognized by civilized nations"\* (see para. 399 above). *Regional principles* or *standards* of behaviour have also been considered relevant in relations between States. The *principles accepted in Europe* concerning the obligation of States whose activities may be injurious to their neighbours to negotiate with them were invoked by the Netherlands Government in 1973 when the Belgian Government announced its intention to build a refinery near its frontier with the Netherlands (see para. 112 above). Similarly, in an official letter to Mexico concerning the protective measures taken by that country to prevent flooding, the United States Government referred to the "*principle of international law*\* which obligates every State to respect the full sovereignty of other States" (see para. 248 above).

606. In their decisions, domestic courts, in addition to citing domestic law, have referred to the applicability of international law, the principles of international comity, etc. For example, the German Constitutional Court, having to render a provisional decision concerning the flow of the waters of the Danube in the *Donauversinkung* case (1927), raised the question of the bearing of acts of interference with the flow of the waters of an international watercourse on international law. It stated that "only considerable interference with the natural flow of international rivers can form the basis for claims under *international law*"\* (see para. 160 above). Again, in the *Roya* case (1939), the Italian Court of Cassation referred to international obligations. It stated that a

State "cannot disregard the *international duty*\* . . . not to impede or to destroy . . . the opportunity of the other States to avail themselves of the flow of water for their own national needs" (see para. 154 above). Finally, in its judgment in the *United States v. Arjona* case (1887), the United States Supreme Court invoked the *law of nations*, which "requires every national Government to use 'due diligence' to prevent a wrong being done within its own dominion to another nation . . ." (see para. 187 above).

### C. Enforcement of judgments

607. If the rights of injured parties are to be effectively protected, it is essential that decisions and judgments awarding compensation should be enforceable. State practice has established the principle that States must not impede or claim immunity from judicial procedures dealing with disputes arising from extraterritorial injuries resulting from activities undertaken within their jurisdiction. States have thus agreed to enforce the awards rendered by the competent organs concerning disputes arising from such injuries.

#### (a) Multilateral agreements

608. Multilateral agreements generally contain provisions relating to this last step in the protection of the rights of injured parties. They provide that, once a final judgment on compensation has been rendered, it shall be enforced in the territories of the contracting parties and that the parties may not invoke jurisdictional immunity. For example, the 1960 Convention on Third Party Liability in the Field of Nuclear Energy provides, in article 13, paragraphs (d) and (e), that final judgments rendered by a court competent under the Convention are *enforceable in the territory of any of the contracting parties*, and that, if an action for damages is brought against a contracting party, as an operator liable under the Convention, such party *may not invoke jurisdictional immunity*:

#### Article 13

...

(d) Judgments entered by the competent court under this article after trial, or by default, shall, when they have become enforceable under the law applied by that court, become enforceable in the territory of any of the other Contracting Parties as soon as the formalities required by the Contracting Party concerned have been complied with. The merits of the case shall not be the subject of further proceedings. The foregoing provisions shall not apply to interim judgments.

(e) If an action is brought against a Contracting Party under this Convention, such Contracting Party may not, except in respect of measures of execution, invoke any jurisdictional immunities before the court competent in accordance with this article.

609. Similar provisions are contained in the 1952 Convention on Damage caused by Foreign Aircraft to Third Parties on the Surface, which provides that a final judgment pronounced by a competent court shall be enforceable in the territory of any contracting State once the formalities prescribed by the laws of that State have been complied with. Article 20 of the Convention reads in part:

<sup>397</sup> See footnote 23 above.

## Article 20

4. Where any *final judgment*,\* including a judgment by default, is pronounced by a court competent in conformity with this Convention, on which execution can be issued according to the procedural law of that court, *the judgment shall be enforceable upon compliance with the formalities prescribed by the laws of the Contracting State*,\* or of any territory, State or province thereof, where execution is applied for:

(a) in the Contracting State where the judgment debtor has his residence or principal place of business or,

(b) if the assets available in that State and in the State where the judgment was pronounced are insufficient to satisfy the judgment, in any other Contracting State where the judgment debtor has assets.

5. Notwithstanding the provisions of paragraph 4 of this article, the court to which application is made for execution may refuse to issue execution if it is proved that any of the following circumstances exist:

(a) the judgment was given by default and the defendant did not acquire knowledge of the proceedings in sufficient time to act upon it;

(b) the defendant was not given a fair and adequate opportunity to defend his interests;

(c) the judgment is in respect of a cause of action which had already, as between the same parties, formed the subject of a judgment or an arbitral award which, under the law of the State where execution is sought, is recognized as final and conclusive;

(d) the judgment has been obtained by fraud of any of the parties;

(e) the right to enforce the judgment is not vested in the person by whom the application for execution is made.

6. The merits of the case may not be reopened in proceedings for execution under paragraph 4 of this article.

7. The court to which application for execution is made may also refuse to issue execution if the judgment is contrary to the public policy of the State in which execution is requested.

8. If, in proceedings brought according to paragraph 4 of this article, execution of any judgment is refused on any of the grounds referred to in subparagraphs (a), (b) or (d) of paragraph 5 or paragraph 7 of this article, the claimant shall be entitled to bring a new action before the courts of the State where execution has been refused. The judgment rendered in such new action may not result in the total compensation awarded exceeding the limits applicable under the provisions of this Convention. In such new action the previous judgment shall be a defence only to the extent to which it has been satisfied. The previous judgment shall cease to be enforceable as soon as the new action has been started.

The right to bring a new action under this paragraph shall, notwithstanding the provisions of article 21, be subject to a period of limitation of one year from the date on which the claimant has received notification of the refusal to execute the judgment.

9. Notwithstanding the provisions of paragraph 4 of this article, the court to which application for execution is made shall refuse execution of any judgment rendered by a court of a State other than that in which the damage occurred until all the judgments rendered in that State have been satisfied.

The court applied to shall also refuse to issue execution until final judgment has been given on all actions filed in the State where the damage occurred by those persons who have complied with the time limit referred to in article 19, if the judgment debtor proves that the total amount of compensation which might be awarded by such judgments might exceed the applicable limit of liability under the provisions of this Convention.

Similarly such court shall not grant execution when, in the case of actions brought in the State where the damage occurred by those persons who have complied with the time limit referred to in article 19, the aggregate of the judgments exceeds the applicable limit of liability, until such judgments have been reduced in accordance with article 14.

10. Where a judgment is rendered enforceable under this article, payment of costs recoverable under the judgment shall also be enforceable. Nevertheless the court applied to for execution may, on the application of the judgment debtor, limit the amount of such costs to a sum equal to ten *per centum* of the amount for which the judgment is rendered enforceable. The limits of liability prescribed by this Convention shall be exclusive of costs.

11. Interest not exceeding four *per centum* per annum may be allowed on the judgment debt from the date of the judgment in respect of which execution is granted.

12. An application for execution of a judgment to which paragraph 4 of this article applies must be made within five years from the date when such judgment became final. It should be noted that, under paragraph 7 of this article, the execution of a judgment may be refused if that judgment is contrary to the *public policy* of the State where it is to be enforced, and, under paragraph 5, if the judgment has been obtained by fraud or was given by default, the defendant not having acquired knowledge of the proceedings in sufficient time to act.

610. Under the 1966 Additional Convention to the International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 26 February 1961 relating to the liability of the railway for death of and personal injury to passengers, the final judgments rendered by competent courts are enforceable in any other contracting State. Article 20 of the Convention provides:

## Article 20. Execution of judgments. Security for costs

1. *Judgments entered by the competent court*\* under the provisions of this Convention after trial, or by default, shall, when they have become enforceable under the law applied by that court, *become enforceable in any of the other Contracting States*\* as soon as the formalities required in the State concerned have been complied with. The merits of the case shall not be the subject of further proceedings.

The foregoing provisions shall not apply to interim judgments nor to awards of damages in addition to costs, against a plaintiff who fails in his action.

Settlements concluded between the parties before the competent court with a view to putting an end to a dispute, and which have been entered on the record of that court, shall have the force of a judgment of that court.

2. Security for costs shall not be required in proceedings arising out of the provisions of this Convention.

611. Article XII of the 1963 Vienna Convention on Civil Liability for Nuclear Damage contains similar language:

## Article XII

1. *A final judgment*\* entered by a court having jurisdiction under article XI shall be recognized within the territory of any other Contracting Party,\* except:

(a) where the judgment was obtained by fraud;

(b) where the party against whom the judgment was pronounced was not given a fair opportunity to present his case; or

(c) where the judgment is contrary to the public policy of the Contracting Party within the territory of which recognition is sought, or is not in accord with fundamental standards of justice.

2. A final judgment which is recognized shall, upon being presented for enforcement in accordance with the formalities required by the law of the Contracting Party where enforcement is sought, be enforceable as if it were a judgment of a court of that Contracting Party.

3. The merits of a claim on which the judgment has been given shall not be subject to further proceedings.

612. Under article 12 of the 1976 Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources, a judgment given by a competent court, which is enforceable in the State of origin where it is not subject to ordinary forms of review, shall be recognized in the territory of any other State party. If, however, the judgment is obtained by fraud, or if the defendant was not given reasonable notice and a fair opportunity to present his case, the judgment is not enforceable. The article provides further that a judgment recognized as

valid shall be enforceable in the territory of any State party once the "formalities" required by that State have been complied with, but that those formalities may neither reopen the case nor raise the question of applicable law. Article 12 reads:

*Article 12*

1. Any judgment given by a court with jurisdiction in accordance with article 11, which is enforceable in the State of origin where it is no longer subject to ordinary forms of review, shall be recognized in any State Party, except:

(a) where the judgment was obtained by fraud; or  
(b) where the defendant was not given reasonable notice and a fair opportunity to present his case.

2. A judgment recognized under paragraph 1 of this article shall be enforceable in each State Party as soon as the formalities required in that State have been complied with. The formalities shall not permit the merits of the case to be reopened, nor a reconsideration of the applicable law.

613. Article 13 of the same Convention provides that, if the operator is a State party, it will still be subject to the national court of the controlling State or the State in whose territory the damage has occurred, and must waive all defences based on its status as a sovereign State:

*Article 13*

Where a State Party is the operator, such State shall be subject to suit in the jurisdictions set forth in article 11 and shall waive all defences based on its status as a sovereign State.

614. The 1969 International Convention on Civil Liability for Oil Pollution Damage similarly provides that final judgments rendered in a contracting State are enforceable in any other contracting State. Article X of the Convention reads:

*Article X*

1. Any judgment given by a Court with jurisdiction in accordance with article IX which is enforceable in the State of origin\* where it is no longer subject to ordinary forms of review shall be recognized in any Contracting State,\* except:

(a) where the judgment was obtained by fraud; or  
(b) where the defendant was not given reasonable notice and a fair opportunity to present his case.

2. A judgment recognized under paragraph 1 of this article shall be enforceable in each Contracting State as soon as the formalities required in that State have been complied with.\* The formalities shall not permit the merits of the case to be reopened.

615. The Convention provides further, in paragraph 2 of article XI, that States shall waive all defences based on their status as sovereign States:

*Article XI*

2. With respect to ships owned by a Contracting State and used for commercial purposes, each State shall be subject to suit in the jurisdictions set forth in article IX and shall waive all defences based on its status as a sovereign State.\*

616. In the 1972 Convention on International Liability for Damage caused by Space Objects, the language on enforceability of awards is different. Under article XIX, a decision of the Claims Commission shall be final and binding if the parties have so agreed; otherwise, the Commission shall render a recommendatory award, which the parties shall consider in good faith. The enforceability of awards thus depends entirely upon the agreement of the parties. Article XIX of the Convention reads in part:

*Article XIX*

1. The Claims Commission shall act in accordance with the provisions of article XII.

2. The decision of the Commission shall be final and binding if the parties have so agreed; otherwise the Commission shall render a final and recommendatory award, which the parties shall consider in good faith. The Commission shall state the reasons for its decision or award.

617. Finally, the 1978 Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution authorizes States to invoke sovereign immunity only in the case of operations conducted by ships owned by a State or used only on government service. Article XIV of the Convention reads:

*Article XIV. Sovereign immunity*

Warships or other ships owned or operated by a State, and used only on government non-commercial service, shall be exempted from the application of the provisions of the present Convention. Each Contracting State shall, as far as possible, ensure that its warships or other ships owned or operated by that State, and used only on government non-commercial service, shall comply with the present Convention in the prevention of pollution to the marine environment.

*(b) Bilateral agreements*

618. Explicit or implicit references to the enforcement of judgments regarding liability for extraterritorial injuries have been made in bilateral agreements. Articles 18 and 19 of the 1970 Treaty between Liberia and the Federal Republic of Germany concerning the German nuclear ship, the *Otto Hahn*,<sup>398</sup> provide that final judgments of Liberian courts regarding nuclear injuries caused by the ship shall be recognized in the Federal Republic of Germany:

*Article 18*

1. Any definite judgment passed by Liberian courts on a nuclear incident caused by the ship shall be recognized in the Federal Republic of Germany if, under paragraph 1 of article X of the Convention, jurisdiction lies with the Liberian Courts.

2. Recognition of a judgment may be refused only if

(a) the judgment was obtained by fraud;  
(b) a legal proceeding between the same parties and on account of the same subject matter is pending before a court in the Federal Republic of Germany and if application was first made to this court;  
(c) the judgment is contrary to a definite decision passed by a court in the Federal Republic of Germany on the subject matter between the same parties;

(d) the operator of the ship did not enter an appearance in the proceeding and if the document instituting the proceeding was served on him not effectively according to the laws of the Republic of Liberia, or not on him personally in the Republic of Liberia or not by granting him German legal assistance or not in due time for the operator of the ship to defend himself, or if the operator can prove that he was unable to defend himself because, without any fault on his part, he did not receive the document for the institution of the legal proceeding or received it too late.

3. In no event will the merits of any case be subject to review.

*Article 19*

Any judgments passed by Liberian courts, which are recognized according to article 18 of this Treaty and which are enforceable under Liberian law, shall be enforceable in the Federal Republic of Germany as soon as the formalities required by the law of the Federal Republic of Germany have been complied with.

<sup>398</sup> See footnote 19 above.

619. Under article VIII of the 1964 Agreement concerning the use of Italian ports by the United States nuclear ship, the N.S. *Savannah*,<sup>399</sup> the United States agreed not to plead the defence of sovereign immunity and to submit to the jurisdiction of Italian courts in the event of a nuclear accident involving the *Savannah* (see the second paragraph of article VIII, cited in para. 458 above). That article appears to refer only to the initial jurisdiction of the Italian courts and does not constitute a waiver of immunity from the execution of judgments. However, it may be assumed that the United States agreed to give effect voluntarily to any judgment rendered against it. It may also be plausibly maintained that the language is general enough to include not only initial jurisdiction but also execution.

620. In the similar Agreement concluded in 1964 with Ireland,<sup>400</sup> the United States agreed not to plead sovereign immunity in any legal action or proceeding brought *in personam* against the United States in an Irish court regarding nuclear injuries involving the

*Savannah*. Paragraph 3 of the Agreement (note 1) provides:

3. Subject to the provisions of this Agreement in any legal action or proceeding brought *in personam* against the United States, in an Irish court, on account of any nuclear incident caused by the ship in Irish waters, or occurring outside Ireland during a voyage of the ship to or from Ireland and causing damage in Ireland, the United States Government

(a) shall not plead sovereign immunity;

(b) shall not seek to invoke the provisions of Irish law or any other law relating to the limitation of shipowner's liability.

This paragraph too may be interpreted to imply United States consent to satisfy any judgment rendered by Irish courts.

(c) *Judicial decisions and State practice other than agreements*

621. The issue of enforcement of awards and judgments by arbitral tribunals and courts has not been raised in judicial decisions. In their official correspondence, States have usually arrived at compromises and in most cases have complied with the solutions agreed upon. The content of such correspondence has been examined in the preceding chapters.

<sup>399</sup> See footnote 20 above.

<sup>400</sup> See footnote 21 above.

## ANNEXES

[See following pages]

## ANNEX I

## Multilateral treaties

	Source	Paragraphs and footnotes in the study
<b>Disarmament</b>		
Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water (Moscow, 5 August 1963)	United Nations, <i>Treaty Series</i> , vol. 480, p. 43	20, fn. 11, 23, 52
Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea-bed and the Ocean Floor and in the Subsoil thereof (London, Moscow and Washington, 11 February 1971)	<i>Ibid.</i> , vol. 955, p. 115	52, 267
Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques (New York, 10 December 1976)	United Nations, <i>Juridical Yearbook 1976</i> (Sales No. E.78.V.5), p. 125	20, fn. 12, 52, 268
<b>Outer space</b>		
Treaty on Principles governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies (London, Moscow and Washington, 27 January 1967)	United Nations, <i>Treaty Series</i> , vol. 610, p. 205	140
Convention on International Liability for Damage caused by Space Objects (London, Moscow and Washington, 29 March 1972)	<i>Ibid.</i> , vol. 961, p. 187	24, 305, 440-443, 492, 498, 549, 585, 590, 616
<b>Law of the Sea</b>		
Convention on the Continental Shelf (Geneva, 29 April 1958)	<i>Ibid.</i> , vol. 499, p. 311	229
United Nations Convention on the Law of the Sea (Montego Bay, Jamaica, 10 December 1982)	<i>Official Records of the Third United Nations Conference on the Law of the Sea</i> , vol. XVII (United Nations publication (Sales No. E.84.V.3), p. 151, document A/CONF.62/122)	25, 43, 56, 57, 75, 101, 126, 130, 201-207, 244, 252, 253, 306, 349, 388, 444, 503, 580, 586, 591
<b>Navigation</b>		
International Convention relating to the Limitation of the Liability of Owners of Seagoing Ships (Brussels, 10 October 1957)	N. Singh, ed., <i>International Maritime Law Conventions</i> , vol. 4, <i>Maritime Law</i> (London, Stevens, 1983), p. 2967	561, 562, 594

International Convention for the Safety of Life at Sea (London, 17 June 1960)	United Nations, <i>Treaty Series</i> , vol. 536, p. 27	83
Convention on Limitation of Liability for Maritime Claims (London, 19 November 1976)	IMCO publication, Sales No. 77.04.E	409
<b>Transport</b>		
Convention for the Unification of certain Rules relating to Damage caused by Aircraft to Third Parties on the Surface (Rome, 29 May 1933) [did not come into force]	M. O. Hudson, <i>International Legislation</i> (Washington, D.C.), vol. VI (1932-1934), p. 334, No. 329	374
Convention on Damage caused by Foreign Aircraft to Third Parties on the Surface (Rome, 7 October 1952)	United Nations, <i>Treaty Series</i> , vol. 310, p. 181	24, 345, 374, 408, 416-420, 485, 500, 558, 609
Additional Convention to the International Convention concerning the Carriage of Passengers and Luggage by Rail (CIV) of 25 February 1961, relating to the Liability of the Railway for Death of and Personal Injury to Passengers, and Protocol B (Bern, 26 February 1966), and Protocol I (Bern, 22 October 1971)	United Kingdom, <i>Treaty Series No. 20</i> (1973), Cmnd. 5249	415, 486, 487, 499, 511, 515, 547, 559, 560, 577, 592, 610
<b>Telecommunications</b>		
International Radiotelegraph Convention (Washington, 25 November 1927)	League of Nations, <i>Treaty Series</i> , vol. LXXXIV, p. 97	27, 58
International Telecommunication Convention (Madrid, 9 December 1932)	<i>Ibid.</i> , vol. CLI, p. 4	27, 59
International Convention concerning the Use of Broadcasting in the Cause of Peace (Geneva, 23 September 1936)	<i>Ibid.</i> , vol. CLXXXVI, p. 301	27, 59
<b>Uses of nuclear energy</b>		
Convention on Third Party Liability in the Field of Nuclear Energy (Paris, 29 July 1960) and Additional Protocol (Paris, 28 January 1964)	United Nations, <i>Treaty Series</i> , vol. 956, pp. 251 and 335	23, 42, 344, 407, 428, 491, 546, 557, 570, 608
Convention on the Liability of Operators of Nuclear Ships (Brussels, 25 May 1962)	IAEA, <i>International Conventions relating to Civil Liability for Nuclear Damage</i> , Legal Series No. 4, rev. ed. (Vienna, 1976), p. 34	23, 50, 342, 421, 439, 488, 489, 506, 514, 548, 573, 593
Vienna Convention on Civil Liability for Nuclear Damage (Vienna, 21 May 1963)	United Nations, <i>Treaty Series</i> , vol. 1063, p. 265	23, 42, 50, 198, 343, 425, 426, 490, 496, 510, 513, 516, 571, 572, 611
Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (Brussels, 17 December 1971)	<i>Ibid.</i> , vol. 974, p. 255	424

Environment	Source	Paragraphs and footnotes in the study
ATMOSPHERE		
Convention on Long-range Transboundary Air Pollution (Geneva, 13 November 1979)	E/ECE/1010	71, 99, 129
Vienna Convention for the Protection of the Ozone Layer (Vienna, 22 March 1985)	UNEP, Nairobi, 1985	266
MARINE ENVIRONMENT		
International Convention for the Northwest Atlantic Fisheries (Washington, 8 February 1949)	United Nations, <i>Treaty Series</i> , vol. 157, p. 157	26, 51, 303, 304
North-East Atlantic Fisheries Convention (London, 24 January 1959)	<i>Ibid.</i> , vol. 486, p. 157	231
International Convention for the Conservation of Atlantic Tunas (Rio de Janeiro, 14 May 1966)	<i>Ibid.</i> , vol. 673, p. 63	26, 51, 72, 265, 308
Agreement for Co-operation in dealing with Pollution of the North Sea by Oil (Bonn, 9 June 1969)	<i>Ibid.</i> , vol. 704, p. 3	264
International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Brussels, 29 November 1969)	<i>Ibid.</i> , vol. 970, p. 211	52, 102, 132, 175, 243, 309, 410
International Convention on Civil Liability for Oil Pollution Damage (Brussels, 29 November 1969)	<i>Ibid.</i> , vol. 973, p. 3	25, 129, 347, 422, 423, 493, 494, 497, 574, 614, 615
International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Brussels, 18 December 1971)	<i>Ibid.</i> , vol. 1110, p. 57	495, 576
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London, Mexico, Moscow and Washington, 29 December 1972)	<i>Ibid.</i> , vol. 1046, p. 120	25, 51, 257, 387
International Convention for the Prevention of Pollution from Ships (London, 2 November 1973)	United Nations, <i>Juridical Yearbook 1973</i> (Sales No. E.75.V.1), p. 81	25, 128
1973 Protocol relating to Intervention on the High Seas in case of Marine Pollution by Substances other than Oil (London, 2 November 1973)	<i>Ibid.</i> , p. 91	242
Denmark, Finland, Norway and Sweden: Convention on the Protection of the Environment (Stockholm, 19 February 1974)	United Nations, <i>Treaty Series</i> , vol. 1092, p. 279	41, 134, 135, 170-172, 199, 429, 578
Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki, 22 March 1974)	UNEP, <i>Selected Multilateral Treaties in the Field of the Environment</i> , Reference Series 3 (Nairobi, 1983), p. 405	122, 123, 126, 198, 386
Convention on the Prevention of Marine Pollution from Land-based Sources (Paris, 4 June 1974)	<i>Ibid.</i> , p. 430	100, 116-121, 174, 254-256
Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona, 16 February 1976)	<i>Ibid.</i> , p. 448	124-126, 198, 386
Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources (London, 17 December 1976)	<i>Ibid.</i> , p. 474	348, 384, 504, 512, 563, 579, 612, 613



Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution (Kuwait, 24 April 1978)	United Nations, <i>Treaty Series</i> , vol. 1140, p. 133	70, 302, 385, 617
Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena de Indias, Colombia, 24 March 1983)	UNEP, Nairobi, 1983; <i>International Legal Materials</i> (Washington, D.C.), vol. 22, 1983, p. 221	60, 103, 270, 389
IMO, Draft convention on liability and compensation in connection with the carriage of noxious and hazardous substances by sea (13 January 1984)	LEG/CONF.6/3	346, 430, 501, 502

## RIVERS AND LAKES

Belgium, France and Luxembourg: Protocol to Establish a Tripartite Standing Committee on Polluted Waters (Brussels, 8 April 1950)	United Nations, <i>Treaty Series</i> , vol. 66, p. 285	74, 173, 200, 259
Convention on the Protection of Lake Constance against Pollution (Steckborn, Switzerland, 27 October 1960)	Switzerland, <i>Recueil officiel des lois et des ordonnances</i> , 1961, vol. 2, p. 923, No. 43 [for English text, see AEU/TFP/ENV/75.11, annex 1]	25, 74, 133, 258, 301, 307
France, Federal Republic of Germany and Luxembourg: Protocol concerning the Establishment of an International Commission to Protect the Moselle against Pollution (Paris, 20 December 1961)	United Nations, <i>Treaty Series</i> , vol. 940, p. 211	261
Agreement on the International Commission for the Protection of the Rhine against Pollution (Bern, 29 April 1963)	<i>Ibid.</i> , vol. 994, p. 3	262
Additional Agreement to the Agreement signed at Bern on 29 April 1963 (Bonn, 3 December 1976)	<i>Official Journal of the European Communities</i> , vol. 20, No. L 240, 19 September 1977, p. 35	fn. 201
European Agreement on the Restriction of the Use of Certain Detergents in Washing and Cleaning Products (Strasbourg, 16 September 1968)	European Treaty Series, No. 64, Strasbourg, 1971	131
Convention for the Protection of the Rhine against Chemical Pollution (Bonn, 3 December 1976)	United Nations, <i>Treaty Series</i> , vol. 1124, p. 375	127, 263

## Frontier questions

France, Federal Republic of Germany and Switzerland: Exchange of letters constituting an agreement concerning the establishment of an Intergovernmental Commission on Contiguity problems in frontier regions (Paris, 22 October 1975)	United Nations, <i>Treaty Series</i> , vol. 1036, p. 367	260
--	--	-----

## ANNEX II

### Bilateral treaties

#### ABBREVIATIONS

BFSP	<i>British and Foreign State Papers</i>
ILM	<i>International Legal Materials</i>
<i>Ríos y Lagos</i>	OAS, <i>Ríos y Lagos Internacionales (Utilización para fines agrícolas e industriales)</i> , 4th ed., rev. (OAS/SER.I/VI, CIJ-75 Rev.2)
Rüster and Simma	B. Rüster and B. Simma, eds., <i>International Protection of the Environment. Treaties and Related Documents</i> (Dobbs Ferry, N.Y., Oceana Publications)
<i>Legislative Texts</i>	United Nations, <i>Legislative Texts and Treaty Provisions concerning the Utilization of International Rivers for Other Purposes than Navigation</i> (Sales No. 63.V.4)

#### Source

#### Paragraphs and footnotes in the study

#### Nuclear and space activities

##### *Belgium and France*

Convention on radiological protection with regard to the installations of the Arden- nes nuclear power station (Paris, 23 September 1966)	United Nations, <i>Treaty Series</i> , vol. 588, p. 227	28, 82, 313
--	--	-------------

##### *France and USSR*

Exchange of notes constituting an agreement concerning the prevention of the ac- cidental or unauthorized use of nuclear weapons (Moscow, 16 July 1976)	United Nations, <i>Treaty Series</i> , vol. 1036, p. 299	28, 283
--	---	---------

##### *United States of America and Canada*

Exchange of notes constituting an agreement concerning liability for loss or damage from certain rocket launches (Ottawa, 31 December 1974)	<i>Ibid.</i> , vol. 992, p. 97	140, 392, 548
--	--------------------------------	---------------

#### Frontier waters

##### *Argentina and Chile*

Act of Santiago concerning hydrologic basins (26 June 1971)	<i>Ríos y Lagos</i> , pp. 495-496; English text in <i>Yearbook . . . 1974</i> , vol. II (Part Two), p. 324, document A/CN.4/274, para. 327	145, 310
---	---	----------

<i>Argentina and Uruguay</i>		
Treaty concerning the La Plata River and its maritime limits (Montevideo, 19 November 1973)	INTAL, <i>Derecho de la Integración</i> , (Buenos Aires), vol. VII, No. 15, March 1974, p. 225; ILM, vol. 13, 1974, p. 251	451
<i>Belgium and Netherlands</i>		
Treaty concerning the improvement of the Terneuzen and Ghent Canal and the settlement of various related matters (Brussels, 20 June 1960)	United Nations, <i>Treaty Series</i> , vol. 423, p. 19	177
<i>Belgium and United Kingdom</i>		
Arrangement regarding water rights on the boundary between Tanganyika and Ruanda-Urundi (London, 22 November 1934)	League of Nations, <i>Treaty Series</i> , vol. CXC, p. 103	143
<i>Bulgaria and Turkey</i>		
Agreement concerning co-operation in the use of the waters of rivers flowing through the territory of both countries (Istanbul, 23 October 1968)	United Nations, <i>Treaty Series</i> , vol. 807, p. 117	81
<i>Canada and United States of America</i>		
Treaty relating to co-operative development of the water resources of the Columbia River Basin (Washington, 17 January 1961)	<i>Ibid.</i> , vol. 542, p. 245	285
<i>Czechoslovakia and Poland</i>		
Agreement concerning the use of water resources in frontier waters (Prague, 21 March 1958)	<i>Ibid.</i> , vol. 538, p. 89	141, 179
<i>Finland and Norway</i>		
Agreement between the Governments of Finland and Norway on the transfer from the course of the Näätämo (Neiden) river to the course of the Gandvik river of water from the Garsjöen, Kjerringvatn and Förstevannene lakes (Oslo, 25 April 1951)	<i>Legislative Texts</i> , p. 609, No. 168; Rüster and Simma, vol. X, p. 5011	314, 452, 517
<i>Finland and Sweden</i>		
Agreement concerning frontier rivers (Stockholm, 15 December 1971)	United Nations, <i>Treaty Series</i> , vol. 825, p. 191	208-210, 433, 520, 552, 587
<i>Finland and Russian Socialist Federal Soviet Republic</i>		
Convention concerning the maintenance of river channels and the regulation of fishing on watercourses forming part of the frontier between Finland and Russia (Helsingfors, 28 October 1922)	League of Nations, <i>Treaty Series</i> , vol. XIX, p. 183	61, 141
<i>Finland and USSR</i>		
Agreement concerning frontier watercourses (Helsinki, 24 April 1964)	United Nations, <i>Treaty Series</i> , vol. 537, p. 231	178, 450
<i>Germany and Denmark</i>		
Agreement for the settlement of questions relating to watercourses and dikes on the German-Danish frontier (Copenhagen, 10 April 1922)	League of Nations, <i>Treaty Series</i> , vol. X, p. 201	105, 183, 214, 246, 394, 412, 434

	Source	Paragraphs and footnotes in the study
<i>Hungary and Austria</i>		
Treaty concerning the regulation of water economy questions in the frontier region (Vienna, 9 April 1956)	United Nations, <i>Treaties Series</i> , vol. 438, p. 123	148, 282
<i>Norway and Sweden</i>		
Convention on certain questions relating to the law on watercourses (Stockholm, 11 May 1929)	League of Nations, <i>Treaty Series</i> , vol. CXX, p. 263	77, 107, 141, 181, 182, 212, 521, 581, 595
<i>Poland and German Democratic Republic</i>		
Agreement concerning navigation in frontier waters and the use and maintenance of frontier waters (Berlin, 6 February 1952)	United Nations, <i>Treaty Series</i> , vol. 304, p. 131	284, 315
<i>Romania and Yugoslavia</i>		
General Convention concerning the hydraulic system (Belgrade, 14 December 1931)	League of Nations, <i>Treaty Series</i> , vol. CXXXV, p. 31	106, 138, 176, 272, 317
<i>USSR and Finland</i>		
Additional Protocol concerning compensation for loss and damage and for the work to be carried out by Finland in connection with the implementation of the Agreement of 29 April 1959 between the Government of the Union of Soviet Socialist Republics, the Government of Finland and the Government of Norway concerning the regulation of Lake Inari by means of the Kaitakoski hydroelectric power station and dam (Moscow, 29 April 1959)	United Nations, <i>Treaty Series</i> , vol. 346, p. 209	453
<i>United Kingdom and United States of America</i>		
Treaty relating to boundary waters and questions arising along the boundary between Canada and the United States (Washington, 11 January 1909)	BFSP, 1908-1909, vol. 102, p. 137; <i>Legislative Texts</i> , p. 260, No. 79	76, 139, 213, 393, 505
<i>Yugoslavia and Austria</i>		
Convention concerning water economy questions relating to the Drava (Geneva, 25 May 1954)	United Nations, <i>Treaty Series</i> , vol. 227, p. 111	149
Agreement concerning water economy questions in respect of the frontier sector of the Mura and of its frontier waters (Mura Agreement) (Vienna, 16 December 1954)	<i>Ibid.</i> , vol. 396, p. 75	274
<i>Yugoslavia and Greece</i>		
Agreement concerning hydro-economic questions (Athens, 18 June 1959)	<i>Ibid.</i> , vol. 363, p. 133	79

*Yugoslavia and Hungary*

Agreement concerning fishing in frontier waters (Belgrade, 25 May 1957)

*Legislative Texts*, p. 836, No. 229; Rüster and Simma, vol. IX, p. 4572 447*Yugoslavia and Romania*

Agreement concerning questions of water control on water control systems and watercourses on or intersected by the State frontier, together with the Statute of the Yugoslav-Romanian Water Control Commission (Bucharest, 7 April 1955)

*Legislative Texts*, p. 928, No. 253; Rüster and Simma, vol. IX, p. 4531 141, 180**Environment***Canada and United States of America*

Exchange of notes constituting an agreement relating to joint pollution contingency plans for spills of oil and other noxious substances in waters of mutual interest (Ottawa, 19 June 1974)

United Nations, *Treaty Series*, vol. 951, p. 287 316

Agreement relating to the exchange of information on weather modification activities (Washington, 26 March 1975)

*Ibid.*, vol. 977, p. 385 29, 104, 245, 391

Agreement to track air pollution across Eastern North America (Acid Rain Research) (Ottawa, 23 August 1983)

ILM, vol. 22, 1983, p. 1017 286

*United States of America and Mexico*

Agreement on co-operation for the protection and improvement of the environment in the border area (La Paz, Baja California, Mexico, 14 August 1983)

*Ibid.*, p. 1025 30, 63, 78, 136, 176, 211, 273, 390**Nuclear ships***Liberia and Federal Republic of Germany*Treaty on the use of Liberian waters and ports by the N.S. *Otto Hahn* (Bonn, 27 May 1970)

Rüster and Simma, vol. I, p. 482 46, fn. 25, 146, 462, 506, 507, 566, 618

*Netherlands and United States of America*Agreement on public liability for damage caused by the N.S. *Savannah* (The Hague, 6 February 1963)United Nations, *Treaty Series*, vol. 487, p. 113 46, 147, 215, 460, 564, 583, 596, 599, 600Operational agreement on arrangements for a visit of the N.S. *Savannah* to the Netherlands (The Hague, 20 May 1963)*Ibid.*, p. 123 fn. 22, 83, 184, 215, 461*United States of America and Ireland*Exchange of notes constituting an agreement relating to public liability for damage caused by the N.S. *Savannah* (Dublin, 18 June 1964)*Ibid.*, vol. 530, p. 217 46, 457, 52, 565, 601

	Source	Paragraphs and footnotes in the study
<i>United States of America and Italy</i>		
Agreement on the use of Italian ports by the N.S. <i>Savannah</i> (Rome, 23 November 1964)	<i>Ibid.</i> , vol. 532, p. 133	46, 83, 184, 215, 458, 565, 597, 619
Exchange of notes constituting an agreement concerning liability during private operation of the N.S. <i>Savannah</i> (Rome, 16 December 1965)	<i>Ibid.</i> , vol. 574, p. 139	fn. 20, 459, 565, 582, 598, 599
<b>Pipelines</b>		
<i>Federal Republic of Germany and Norway</i>		
Agreement relating to the transmission of petroleum by pipeline from the Ekofisk field and neighbouring areas to the Federal Republic of Germany (Bonn, 16 January 1974)	<i>Ibid.</i> , vol. 1016, p. 91	29, 275-278, 351, 431
<i>Norway and United Kingdom</i>		
Agreement relating to the transmission of petroleum by pipeline from the Ekofisk field and neighbouring areas to the United Kingdom (Oslo, 22 May 1973)	<i>Ibid.</i> , vol. 885, p. 5	29, 350, 431, 432
<b>Frontier regime</b>		
<i>Czechoslovakia and Hungary</i>		
Treaty concerning the regime of State frontiers (Prague, 13 October 1956)	<i>Ibid.</i> , vol. 300, p. 125	311
<i>Hungary and Czechoslovakia</i>		
Convention relating to the settlement of questions arising out of the delimitation of the frontier between the Kingdom of Hungary and the Czechoslovak Republic (Frontier Statute) (Prague, 14 November 1928)	League of Nations, <i>Treaty Series</i> , vol. CX, p. 425	150
<i>Hungary and Romania</i>		
Treaty concerning the regime of the Hungarian-Romanian State frontier and co-operation in frontier matters (Budapest, 13 June 1963)	United Nations, <i>Treaty Series</i> , vol. 576, p. 275	62
<i>Hungary and USSR</i>		
Treaty concerning the regime of the Soviet-Hungarian State frontier (Moscow, 24 February 1950)	<i>Legislative Texts</i> , p. 823, No. 226; Rüster and Simma, vol. IX, p. 4493	81, 448
<i>Netherlands and Federal Republic of Germany</i>		
Treaty concerning the course of the common frontier, the boundary waters, real property situated near the frontier, traffic crossing the frontier on land and via inland waters, and other frontier questions (Frontier Treaty) (The Hague, 8 April 1960)	United Nations, <i>Treaty Series</i> , vol. 508, p. 149	150, 449

*Norway and USSR*

Agreement concerning the regime of the Norwegian-Soviet frontier and procedure for the settlement of frontier disputes and incidents (Oslo, 29 December 1949)

*Ibid.*, vol. 83, p. 291

44, 64, 145, 280

*Poland and USSR*

Convention concerning juridical relations on the State frontier (Moscow, 10 April 1932)

League of Nations, *Treaty Series*, vol. CXLI, p. 349

137, 144

Agreement concerning the regime of the Polish-Soviet State frontier (Moscow, 8 July 1948)

United Nations, *Treaty Series*, vol. 37, p. 25

80, 312, 448, 518

*USSR and Finland*

Agreement concerning the regime of the Soviet-Finnish frontier (Moscow, 9 December 1948)

*Ibid.*, vol. 217, p. 135

281, 318

*USSR and Poland*

Treaty concerning the regime of the Soviet-Polish State frontier and co-operation and mutual assistance in frontier matters (Moscow, 15 February 1961)

*Ibid.*, vol. 420, p. 161

141

**Contiguity relations***France and Spain*

Convention on mutual assistance between French and Spanish fire and emergency services (Madrid, 14 July 1959) and Additional Agreement to the Convention (Madrid, 8 February 1973)

*Ibid.*, vol. 951, p. 135

454, 505

*Federal Republic of Germany and Austria*

Agreement concerning the effects on the territory of the Federal Republic of Germany of construction and operation of the Salzburg airport (Vienna, 19 December 1967)

*Ibid.*, vol. 945, p. 87

45, 143, 455, 456, 519

Agreement concerning co-operation with respect to land use (Vienna, 11 December 1973)

*Ibid.*, vol. 966, p. 301

31, 62



## ANNEX III

## Judicial decisions and State practice other than agreements

Paragraphs and footnotes  
in the study

## Permanent Court of International Justice

<i>Lotus</i> , judgment No. 9 of 7 September 1927, <i>P.C.I.J., Series A, No. 10</i>	fn. 10
<i>Territorial jurisdiction of the International Commission of the River Oder</i> , judgment No. 16 of 10 September 1929, <i>P.C.I.J., Series A, No. 23</i>	227
<i>Railway traffic between Lithuania and Poland</i> , advisory opinion of 15 October 1931, <i>P.C.I.J., Series A/B, No. 42</i> , p. 166	108

## International Court of Justice

<i>Corfu Channel, merits</i> , judgment of 9 April 1949, <i>I.C.J. Reports 1949</i> , p. 4	22, 47, 66-68, 152, 185, 337, 401, 402, 465
<i>Asylum case</i> , judgment of 20 November 1950, <i>I.C.J. Reports 1950</i> , p. 286	fn. 10
<i>Fisheries</i> (United Kingdom v. Norway), judgment of 18 December 1951, <i>I.C.J. Reports 1951</i> , p. 116	35, 193, 228, 237
<i>Nottebohm</i> (Liechtenstein v. Guatemala), <i>second phase</i> , judgment of 6 April 1955, <i>I.C.J. Reports 1955</i> , p. 4	fn. 10
<i>North Sea Continental Shelf</i> (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands), judgment of 20 February 1969, <i>I.C.J. Reports 1969</i> , p. 3	10, 35, 108, 165, 193, 229, 237, 338
<i>Legal consequences for States of the continued presence of South Africa in Namibia (South West Africa) notwithstanding Security Council resolution 276 (1970)</i> , order No. 2 of 26 January 1971 (request for advisory opinion), <i>I.C.J. Reports 1971</i> , p. 6	476
<i>Nuclear Tests</i> (Australia v. France; New Zealand v. France), <i>Interim measures of protection</i> , orders of 22 June 1973, <i>I.C.J. Reports 1973</i> , pp. 99 and 135	33, 166, 322, 529
<i>Nuclear Tests</i> (Australia v. France; New Zealand v. France), judgments of 20 December 1974, <i>I.C.J. Reports 1974</i> , pp. 253 and 457	6, fn. 8
<i>Fisheries Jurisdiction</i> (United Kingdom v. Iceland; Federal Republic of Germany v. Iceland), judgments of 25 July 1974, <i>I.C.J. Reports 1974</i> , pp. 3 and 175	35, 54, 111, 155, 193, 230, 237, 321, 327, 336
<i>Continental Shelf</i> (Tunisia/Libyan Arab Jamahiriya), judgment of 24 February 1982, <i>I.C.J. Reports 1982</i> , p. 18	35, 232-234

## International arbitration

Source

<b>Alabama claims</b> (United States of America/United Kingdom), award of 14 September 1872	J. B. Moore, <i>History and Digest of the International Arbitrations to which the United States has been a Party</i> (Washington, D.C., 1898), vol. I, p. 653	49, 396, 397, 541, 553
---	---	------------------------

<i>Island of Palmas</i> case (Netherlands/United States of America), award of 4 April 1928	United Nations, <i>Reports of International Arbitral Awards</i> , vol. II (Sales No. 1949.V.1), p. 829	476
<i>Trail Smelter</i> case (United States of America/Canada), awards of 16 April 1938 and 11 March 1941	<i>Ibid.</i> , vol. III (Sales No. 1949.V.2), p. 1905	20, 32, 47, 65, 96, 153, 194, 195, 294-296, 325, 326, 330, 335, 340, 400, 437, 481, 526, 528, 532-540, 589, 604
Arbitration between <i>Petroleum Development (Trucial Coast) Ltd.</i> and the <i>Sheikh of Abu Dhabi</i> , award of 28 August 1951	<i>The International and Comparative Law Quarterly</i> , London, vol. 1, 1952, p. 247	35
<i>Lake Lanoux</i> case (Spain/France), award of 16 November 1957	United Nations, <i>Reports of International Arbitral Awards</i> , vol. XII (Sales No. 63.V.3), p. 281. For summary in English, see <i>International Law Reports 1957</i> (London, 1961), p. 101; see also <i>Yearbook . . . 1974</i> , vol. II (Part Two), pp. 194-199, document A/CN.4/5409, paras. 1055-1068	34, 47, 109, 110, 152, 156-158, 162, 192, 219, 237, 334, 403, 404
<i>Gut Dam Claims</i> (United States of America/Canada), award of 27 September 1968	<i>International Legal Materials</i> (Washington, D.C.), vol. 8, 1969, p. 118	471, 472
<i>Delimitation of the continental shelf between the United Kingdom of Great Britain and Northern Ireland and the French Republic</i> , award of 30 June 1977	United Nations, <i>Reports of International Arbitral Awards</i> , vol. XVIII (Sales No. E/F 80.V.7), p. 3	235
<b>National courts</b>		
<b>FRANCE</b>		
<i>Jeand'heur v. Galeries belfortaises</i> (1927), Dalloz, <i>Recueil périodique et critique</i> , 1930 (Paris), part 1, p. 57		fn. 275, fn. 300
<b>GERMANY</b>		
<i>Donauversinkung (Württemberg and Prussia v. Baden)</i> (1927), <i>Entscheidungen des Reichsgerichts in Zivilsachen</i> (Berlin), vol. 116, appendix 2, p. 18; <i>Annual Digest of Public International Law Cases, 1927-1928</i> , p. 128, case No. 86		22, fn. 13, 160, 606
<b>ITALY</b>		
<i>Société énergie électrique du littoral méditerranéen v. Compania imprese elettriche liguri</i> (the <i>Roya</i> case) (1939), <i>Il Foro Italiano</i> (Rome), vol. 64, part 1, col. 1036; <i>Annual Digest and Reports of Public International Law Cases, 1938-1940</i> (London), vol. 9, p. 120, case No. 47		34, 36, 154, 606
<b>SWITZERLAND</b>		
<i>Solothurn v. Aargau</i> (1900), <i>Recueil officiel des arrêts du Tribunal fédéral suisse, 1900</i> , vol. 26, part 1, p. 444		221
<i>Aargau v. Solothurn</i> (1915), <i>Recueil . . .</i> , 1915, vol. 41, part 1, p. 126		221

## UNITED KINGDOM

*Rylands v. Fletcher* (1866), *The Law Reports, Court of Exchequer*, vol. I, p. 265; (1868), *The Law Reports, House of Lords*, vol. III, p. 330 363, fn. 269, 364, 377

## UNITED STATES OF AMERICA

*Connecticut v. Massachusetts* (1931), *United States Reports*, vol. 282, p. 660 225, 226  
*Escola v. Coca Cola Bottling Co.* (1944), *California Reports, 2d Series*, vol. 24, p. 453 370  
*Georgia v. Tennessee Copper Company* (1907), *United States Reports*, vol. 206, p. 230 161  
*Goldberg v. Kollsman Instrument Corp.* (1963), *New York Supplement, 2d Series*, vol. 240, p. 592 fn. 281  
*Illinois v. Milwaukee* (1972), *United States Reports*, vol. 406, p. 91 191  
*Kansas v. Colorado* (1902), *ibid.*, vol. 185, p. 125 159  
*Kansas v. Colorado* (1907), *ibid.*, vol. 206, p. 46 34, 226  
*Missouri v. Illinois* (1906), *ibid.*, vol. 200, p. 496 34, 162  
*Natural Resources Defense Council v. Morton* (1972), *Federal Reporter, 2d Series*, vol. 458, p. 827 fn. 234  
*Nebraska v. Wyoming* (1945), *United States Reports*, vol. 325, p. 589 223  
*New Jersey v. New York* (1931), *ibid.*, vol. 283, p. 336 224  
*Prentiss v. National Airlines* (1953), *Federal Supplement*, vol. 112, p. 306 fn. 287  
*United States v. Arjona* (1887), *United States Reports*, vol. 120, p. 479 36, 186-188, 606  
*Washington v. Oregon* (1936), *ibid.*, vol. 297, p. 517 222  
*Wilderness Society v. Hickel* (1970), *Federal Supplement*, vol. 325, p. 422 320, fn. 234  
*Wilderness Society v. Morton* (1973), *Federal Reporter, 2d Series*, vol. 479, p. 842 320, fn. 234

## State practice\*

## HARMFUL OR DANGEROUS ACTIVITIES IN FRONTIER AREAS

## Source

## Czechoslovakia-Austria

Construction of a nuclear reactor at Dukovany, Czechoslovakia, near the Austrian border (1975) G. Handl, "An international legal perspective of abnormally dangerous activities in frontier areas: The case of nuclear power plant siting", *Ecology Law Quarterly* (Berkeley, Cal.), vol. 7, 1978, p. 28 112

---

\* The source State is cited first.

*France-Switzerland*

French military target practice near the Swiss border (1892)

P. Guggenheim, "La pratique suisse (1956)", *Annuaire suisse de droit international*, 1957 (Zürich), vol. 14, p. 168 238, 332*Hungary-Austria*

Mine-laying by the Hungarian authorities near the Austrian border (1949)

Handl, *loc. cit.*, pp. 23-24 474*Italy-Switzerland*

Explosion of a munitions plant at Arcisate, Italy, near the Swiss border (1948)

Guggenheim, *loc. cit.*, p. 169 477*Mexico-United States of America*

Correspondence concerning the construction of a highway, in Mexico, across the Smugglers and Goat Canyons, and consequent danger of flooding in the United States (1957-1959)

M. M. Whiteman, ed., *Digest of International Law* (Washington, D.C.), vol. 6, pp. 260-262 36, 93, 163, 220, 239, 292, 466*Switzerland-Austria*

Planned construction of a nuclear reactor at Rüthi, Switzerland, near the Austrian border (1972-1976)

Handl, *loc. cit.*, pp. 28-30 112*Switzerland-Liechtenstein*

Accidental shelling of Liechtenstein territory by Swiss artillery (1968)

*Annuaire suisse de droit international*, 1969-1970 (Zürich), vol. 26, p. 158 475*United States of America-Mexico*

Correspondence concerning the construction of the Rose Street Canal at Douglas, Arizona, and consequent danger of flooding at Agua Prieta, in Mexico (1951-1955)

Whiteman, *op. cit.*, vol. 6, pp. 262-265 94, 95, 248, 299, 467, 605

## POLLUTION AND ENVIRONMENTAL PROTECTION

*Austria-Yugoslavia*

Pollution of the Mura River by Austrian hydroelectric plants (1956-1959)

Handl, "State liability for accidental transnational environmental damage by private persons", *American Journal of International Law* (Washington, D.C.), vol. 74, 1980, pp. 545-546 478, 530, 555*Belgium-Netherlands*

Establishment of a refinery at Lanaye, Belgium, near the Netherlands frontier (1972-1973)

Belgian Parliament, *Questions et Réponses*, 19 July 1973 113, 605*Canada-United States of America*

Oil prospection in the Beaufort Sea (1976-1977)

*International Canada* (Toronto), vol. 7, 1976, pp. 84-85 357, 437, 483

	Source	Paragraphs and footnotes in the study
<i>France-Belgium</i>		
Atmospheric pollution at the mouth of the Yser (1973)	Belgian Parliament, <i>Questions et Réponses</i> , 29 May 1973	297
Pollution of the Thure, an affluent of the Sambre (1973)	<i>Ibid.</i> , 4 July 1973	298
<i>France-Federal Republic of Germany</i>		
Adoption by a plant in Lorraine, situated near the German border, of German standards of air quality (1980)	<i>International Environment Reporter</i> (Washington, D.C.), vol. 3, No. 9, 10 September 1980	190
<i>France-Switzerland</i>		
Pollution of Swiss territory by a French chemical plant situated near the border (1973)	<i>Annuaire suisse de droit international</i> (Zürich), 1974, vol. 30, p. 147	482
<i>Liberia-Japan</i>		
Oil slick caused by the foundering of the Liberian tanker <i>Juliana</i> on the Japanese coast (1971)	<i>The Times</i> , London, 1 October 1974, p. 8, col. 1	479, 530
<i>United States of America-Canada</i>		
Oil spill at Cherry Point, State of Washington, and pollution of Canadian beaches (1972)	<i>The Canadian Yearbook of International Law</i> , 1973, (Vancouver), vol. 11, p. 333	436, 480, 544
<i>United States of America-Mexico</i>		
Correspondence concerning the polluting activities of the Peyton Packing Company and the Casuco Company situated near the Mexican border (1961)	Whiteman, <i>op. cit.</i> , vol. 6, pp. 256-259	32, 324, 339, 437
NUCLEAR AND OUTER SPACE TESTING		
<i>United Kingdom-Japan</i>		
Nuclear tests in the Christmas Islands (1957)	Whiteman, <i>op. cit.</i> , vol. 4, pp. 596-600	33, 90, 91, 189, 216, 218, 236, 239, 247
<i>United States of America-Canada</i>		
"Cannikin" underground nuclear testing in the Aleutian island of Amchitka (1971)	<i>International Canada</i> (Toronto), vol. 2, 1971, p. 97	240, 247, 468
<i>United States of America-Japan and Marshall Islands Territory</i>		
Nuclear testing at Eniwetok Atoll (1954-1958)	Whiteman, <i>op. cit.</i> , vol. 4, pp. 565-596	33, 84-90, 189, 216, 217, 236, 239, 247, 288-290, 328, 329, 331, 333, 469, 470, 508, 525, 531, 553, 555, 584

*United States of America-Scientific community*

- West Ford Test: launching of 20 kilograms of copper needles into outer space (1961) *The New York Times*, issues of 30 July 1961, p. 48, col. 1; 3 February 1962, p. 5, col. 1; 10 May 1962, p. 16, col. 4; 13 May 1963, p. 1, col. 5; 21 May 1963, p. 3, col. 1; 23 September 1963, p. 28, col. 2 319

## AIR AND SPACE CRASHES

*USSR-Canada*

- Crash of the Soviet satellite *Cosmos 954* on Canadian territory (1978) *International Legal Materials* (Washington, D.C.), vol. 18, p. 907 33, 48, 399, 464, 527, 541-543, 605

*United States of America-Spain*

- Palomares air crash (1966) T. Szuld, *The Bombs of Palomares* (New York, 1967) 523, 554

## HEALTH PROTECTION

*Mexico-United States of America*

- Campaign for the eradication of foot-and-mouth disease (1947-1949) Whiteman, *op. cit.*, vol. 6, p. 266 164, 293