Survey of Current Developments in International Environmental Law

Alexandre Charles Kiss

FOREWORD

In the last few years there has been unprecedented interest in international environmental law. Nevertheless, there have been few attempts to trace the broad developments that have taken place.

The present paper by Professor A.C.Kiss surveys the various developments in the field, emphasizing the legal rules recently developed at global, regional and bilateral levels. Because of the broad scope of the work, detailed examinations and references have been kept to a minimum. Furthermore, discussion of doctrinal problems has been avoided. Laymen will, therefore, find this a useful introduction to the current situation in international environmental law. At the same time, it will be useful to specialists since it includes a valuable review of environmentally important treaties and agreements concluded recently throughout the world.

In his paper Professor Kiss examines the nature of current world-wide environmental deterioration and the necessity of seeking international solutions since elements such as rivers, seas, air and wildlife are not confined by national boundaries. International law is often less definitive than national law when dealing with environmental problems, but it is clear that there has been a very rapid growth of international environmental provisions and that these are being increasingly observed by the nations of the world. Professor Kiss emphasizes the application of the fundamental principles of international law to current international developments concerned with water, air and wildlife protection.

Believing that this introduction to international environmental law will be useful to its members and to its collaborators in the various fields of environmental protection, IUCN has published the survey amongst its Environmental Policy and Law Papers. It acknowledges with appreciation the support given by the Fund for Environmental Studies (FUST) in making the publication possible.

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PART I INTRODUCTION AND SOURCES

CHAPTER I

INTRODUCTION

	THE ENVIRONMENT							
2.	THE QUALITY OF LIFE THE ECOLOGICAL MOVEMENT DEVELOPING COUNTRIES	1(1(1						
TH	IE NEED FOR AN INTERNATIONAL APPROACH							
1.	INTERRELATIONS OF ALL COMPONENTS	12						
2.	OF THE NATURAL ENVIRONMENT ECONOMIC ASPECTS OF THE PROTECTION	. 10						
<i>3</i> .	OF THE ENVIRONMENT IS THERE AN INTERNATIONAL	14						
4.	ENVIRONMENTAL LAW AN INTERDISCIPLINARY APPROACH TO INTERNATIONAL ENVIRONMENTAL LAW	15						
	CHAPTER II							
THE SOURCES OF INTERNATIONAL ENVIRONMENTAL LAW								
IN	TERNATIONAL COMMON LAW							
MA	ANDATORY REGULATIONS							
1.	MULTILATERAL TREATIES	18 19						
	BILATERAL TREATIES DECISIONS OF INTERNATIONAL BODIES	19 20						
<i>3</i> .		19 20						
3. RE 1. 2.	DECISIONS OF INTERNATIONAL BODIES	19 20 23 24 25						

PART II

FUNDAMENTAL PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW

CHAPTER III

THE RIGHT TO INFORMATION AND TO DUE PROCESS

TH	E RIGHT TO INFORMATION								
1.	IS THERE A GENERAL OBLIGATION	30							
<i>2</i> .	TO INFORM? EXISTING TREATY PROVISIONS	31							
<i>3</i> .	AND RULES OF REGIONAL ORGANIZATIONS RIGHTS OF INDIVIDUALS	35							
THE RIGHT TO DUE PROCESS									
1.	ENVIRONMENTAL PREJUDICE IN DOMESTIC	37							
<i>2</i> .	LAW SYSTEMS INTERNATIONAL PROCEDURE FOR COMPENSATION FOR TRANSFRONTIER ENVIRONMENTAL PREJUDICE	39							
	CHAPTER IV								
	INTERNATIONAL LIABILITY FOR ENVIRONMENTAL DAMAGES								
PR	INCIPLES								
Ll	ABILITY UNDER GENERAL INTERNATIONAL LAW								
• •	TRAIL SMELTER CASE LAKE LANOUX CASE	43 47							
	CENT DEVELOPMENT OF INTERNATIONAL LIABILITY OR ENVIRONMENTAL DAMAGES								
1.	RESPONSIBILITY FOR ENVIRONMENTAL	48							
2.	DAMAGE TO THE COMMONS COMPENSATION FOR THE VICTIMS OF POLLUTION	52							
	IE ROLE OF INTERNATIONAL LIABILITY THE PROTECTION OF THE ENVIRONMENT								

CHAPTER V

THE PRINCIPLE OF PREVENTION: INTERNATIONAL REGULATION

PRINCIPLES		INIENNALIONAL	NEGULA	4 1 1	100
PRINCIPLES					
	PRINCIPLES				

PR	INCI	PLE	S									
					EY OF E REGULA	XISTING TION	3					
1.	MA	RINE POLLUTION a. Marine Pollution by Normal Uses of the Sea b. Dumping of wastes at Sea c. Land-Based Pollution d. Trends in Future Evolution								57		
<i>2</i> .	PO	LLU a. b.	Reg	ulati		U	AKES Framewoi	rk				69
			i.	Gen	eral obli	gation no	t to pollu	te				
				В.		y Waters Watercou sins						
			ii.	Star	dard Set	ting						
			iii.	Poll	ution Ac		Informat nd Duty t tate	o Cons	ult	LIMON		
			iv.			nt of Com	nmission (or use	of			
3.	AIF a. b. c.	Ger. Reg	neral ulat		es Concerni		fic Forms ng Genera					77
4.	TH: a. b.	Prir Exis	ciple sting	es Inte		VILDLIF I Regulat Wildlife						
		i.	Tre	aties	of Gene	al Conce	rn					
		ii.	Tre	aties	Concern	ing Limit	ted Areas					
		iii.	Tre	aties	Concern	ing Deter	mined Sp	ecies				

- A. Protection of Birds
- B. Protection of Seals
- C. Protection of Polar Bears
- D. Protection of Salmon
- E. Protection of Whales
- F. Protection of Shellfish

iv. Methods of Protection in International Conventions concerning Wildlife

- A. General Prohibitions
- B. Prohibitions of Certain Means of Hunting and Fishing
- C. Establishment of Closed Seasons
- D. Establishment of Quotas
- E. Zoning: Prohibition to Hunt or Fish in Certain Areas
- v. Protection of the Habitat of Determined Species
- vi. Establishment of Reserves and Parks
- vii. Restrictions on Trade in Endangered Species
- viii. Establishment of International Commissions or use of Existing International Organs

THE PRINCIPAL CHARACTERISTICS OF INTERNATIONAL REGULATION FOR THE PROTECTION OF THE ENVIRONMENT

CHAPTER VI

THE PRINCIPLE OF INTERNATIONAL COOPERATION

PRINCIPLES

THE FUNCTIONS OF INTERNATIONAL ORGANS IN THE FIELD OF THE PROTECTION OF THE ENVIRONMENT

THE COORDINATION OF ACTIVITIES OF INTERNATIONAL ORGANIZATIONS

Notes
Table of Treaties
Table of Abbreviations
Index

PART I

INTRODUCTION AND SOURCES

CHAPTER I INTRODUCTION

For several years it has been commonplace to say that the biosphere of mankind is in danger. The exponential growth of the world's population, the pollution and the exhaustion of natural resources may lead to total disruption of the natural balance of the earth.

It may be recalled that, as UN Secretary-General Kurt Waldheim stated at the 1974 Bucharest World Population Conference, it is virtually certain that the world's population will double over the next generation and that the next 30 to 35 years "may be the most challenging in the history of mankind." One of the consequences of the population increase is the increase of human activities and, inevitably, a growing impact on the environment.

However, even apart from population growth, human activities have tended toward strongly increasing intensity. Economic development means more and more objects, services, and commodities, and thus a growing need for land, mineral resources or energy. The natural resources of the earth may become exhausted; even the carrying capacity of renewable ones may be overloaded. The 1973 oil crisis was demonstrative of the potential problem. Simultaneously, pollution may follow the same increasing tendency. It must not be forgotten that most human activities tend to pollute; the crucial aspect of pollution today is that the environment cannot neutralize pollution anymore in a reasonable space of time.

Direct and indirect effects of human activities on the environment may result in the disruption of ecological systems. Ultimately, human life and all other life on the earth can be endangered by such disruptions. However, even if the ultimate possibilities can still be perceived as only a distant danger, it cannot be denied that the deterioration of the environment has important consequences for the quality of human life.

THE AWAKENING OF INTEREST IN THE ENVIRONMENT

1. THE QUALITY OF LIFE

Since the end of the 1960's, public opinion has become more and more conscious of what is called the quality of life. At the beginning, the problem seemed to be a simple one; should we continue increasing our affluence with respect to material goods without any other considerations or should we aim at not merely quantitative but qualitative objectives as the ultimate goals of our economic system?

The problem is actually not as new as one would be tempted to think. One of the main targets of modern societies certainly has been economic growth, i.e., a quantitative objective; and even certain other objectives like the maximisation of the power of the State imply material wealth. Still, there exist other requirements, especially since the end of the Second World War, which are not quantitative ones; social progress and, particularly what is called social justice, call for not only a better standard of life and security of employment, but also (and mainly) a better distribution of the national community wealth and a generalization of material safety and well-being, which is not a quantitative but a qualitative objective.

Anyway, public opinion felt there to be an incompatibility; on the one hand economic growth, high-density urbanization, increasing air and water pollution, noise, increase of criminality, on the other "restoring and maintaining environmental quality to the overall welfare and development of man" (US Declaration of National Environmental Policy of April 3, 1970). The Message on the State of the Union delivered by President Nixon on January 22, 1970 is a good example of this feeling. He stated that an increase of 50% of the national income in the coming ten years will not reany mean that the American nation will be 50% richer and happier. Hence the problem arises; what is the value of economic growth and of the whole economic, social and political system built on the principle that economic growth must be the most important target of every nation? In other words, is an increasing consumption of material goods the basic condition of happiness for each individual? A new alternative value, the quality of life, involves pure air, fresh water, the natural beauty of landscape, wild plants and animals, that is to say a respect for the natural balance of ecological systems.

The aim for a certain quality of life more in accordance with the natural environment, combined with the understanding that our whole biosphere is in danger, constitutes the basis for the ecological movement.

2. THE ECOLOGICAL MOVEMENT

This movement is not a highly organised one, although the thousands of groups and associations at local, regional, national and international levels should be mentioned, as they are interested in the protection of the environment. These groups express a new awareness of the planetary danger of destroying the environment; they reflect as well the understanding that our value system has

been broadened in the last few years to include new ethical and even new economic values: pure air, flora and landscapes, sea-shores and wild animals. One may ask the question whether, after the Middle Ages had focussed on the idea of the divinity and the Humanist Age placed the human being at its center, mankind will not now enter a new age devoted to creation as a whole?

The ecological movement seems to be very deeply rooted in the present-day human consciousness. This fact is of considerable importance for the law, be it national or international, for legal rules must be founded on an ethic composed of values recognised by the society as its own, that is to say, of social values.

Another particularly important feature of the ecological movement is that it has been international almost from the beginning. From the very start it has been felt that environmental problems concern all mankind and that, as a result, the reaction must be a planetary one. Indeed, the systematic elaboration of rules protecting the environment in national legal systems, which substantially began in the middle of the sixties, has been closely followed by the adoption of principles aiming at the protection of the environment on an international level. The rapidity of the whole evolution is amazing; it can be said that environmental law as a system, be it national or international, is less than ten years old. What is perhaps still more important for international cooperation is to understand that for the first time in modern history a movement of public opinion appeared almost immediately at the international level and created solidarities at the same time both within and between the different peoples of the world.

3. DEVELOPING COUNTRIES

However, even if, practically from its beginning, the ecological movement could be considered as international, it was certainly not universal. Public opinion in the industrialised countries was much more concerned with the deterioration of its environment than that of less developed countries. It can even be said that many of the leaders of the Third World were afraid of the subject, fearing that the measures taken to protect the environment would be detrimental to their development. The famous words spoken by a representative of a developing country before the opening of the UN Conference on Human Environment held in Stockholm in 1972, "Let me die polluted", was characteristic of this state of mind.

It is a fact that one of the main difficulties of the Stockholm Conference was to associate representatives of the developing countries in the elaboration of the fundamental principles of international action for the protection of the environment ¹. Hence the constant care of the authors of the Stockholm texts to cope with the most fundamental needs of the developing countries. After having condemned the policies promoting or perpetuating "apartheid", racial segregation, discrimination, colonial and other forms of oppression (Principle I), the Stockholm Declaration on the Human Environment states that economic and social development is essential for ensuring a favourable living and working environment for man (Principle 8), that environmental deficiencies generated by the conditions of underdevelopment can best be remedied by accelerated development, through the transfer of substantial quantities of financial and technological assistance (Principle 9), that for the developing countries, stability of prices and adequate earnings for primary commodities and raw materials are

essential to environmental management (Principle 10), that the environmental policies of all States should enhance the present or future development potential of developing countries (Principle 11), and that resources should be made available to preserve and improve the environment, taking into account the circumstances and particular requirements of developing countries and any costs which may emanate from their incorporating environmental safeguards into their development planning (Principle 12). Moreover, nine out of the 109 recommendations which constitute the Action Plan for the Human Environment are devoted to the relationship between development and environment. These recommendations are rather favorable to developing countries.

Since the time of the Stockholm Conference, the idea that the planet's environment needs protection has been taken more and more seriously by the developing countries' governments. Some of them have become very faithful supporters of international actions tending to safeguard the environment. It is significant that the United Nations Environment Programme has established its headquarters in Nairobi, Kenya, a developing country, which demonstrates growing concern in the Third World with environmental problems.

It may also be added that in the long run there seems to be no major incompatibility between development and the protection of the environment. At a certain level both need a more rational management of the earth's resources and an integrated and coordinated approach. As Principle 13 of the Stockolm Declaration proclaims clearly, rational planning constitutes an essential tool for reconciling any conflict between the needs of development and the need to protect and improve the environment².

THE NEED FOR AN INTERNATIONAL APPROACH

1. INTERRELATIONS OF ALL COMPONENTS OF THE NATURAL ENVIRONMENT

All the components of the natural environment are interrelated. This fact is the basis of the international character of the ecological movement. It has a twofold significance.

Firstly, the environment knows no frontier. Neither air nor the oceans, the rivers or wildlife can be divided into parts according to existing borders. Thus, pollution and other sorts of environmental harm are propagated regardless of State sovereignty and its limits. As a consequence, the struggle against it must be international; it no longer needs to be proved that isolated countries cannot ensure efficient environmental protection on their own.

The earliest forms of environmental harm of significance to international relations were the air pollution cases in border areas. The Trail Smelter, built in Canadian territory in a valley which lay in both the Canadian Province of British Columbia and the American State of Washington, had caused damages to American farmers since the end of the last century by its sulphur dioxide fumes. Nevertheless, the dispute arising from this case went to arbitration only in the thirties. However, with scientific and technological development, pollution and

its international aspects multiplied. It has come to be understood that air pollution not only can affect border areas but can cause serious problems at long distances - e.g., the pollution of Scandinavian lakes by fumes coming from the German Ruhr district as well as from British industrialised areas. After the Second World War the older forms of pollution were joined by new ones. A problem developed with radioactive fallout which can be propagated over several thousands of miles. The increase of polluting materials disposed of into rivers and lakes is similarly at the origin of new forms of environmental harms affecting not only neighbouring countries but even remote ones. The Dutch complain that the pollution of the Rhine - which is their main source of fresh water - comes to their country not only from neighbouring Germany but also from distant France and Switzerland.

The destruction of wildlife likewise has had international aspects. Overfishing in certain maritime areas, overwhaling and excessive seal-hunting were condemned as early as before the First World War, but, as these species live in international areas, only international action could remedy their depletion. Ocean pollution raises a similar problem. Only international cooperation can prevent the marine pollution caused by dumping from ships and aircraft or by casualties in the high seas, outside of all national jurisdictions.

The second aspect of the interrelations among all the components of the natural environment is that interactions are numerous and important between air, rivers, lakes, soil, oceans, underground water, wildlife and even outer space. They cannot be isolated from one another. It is well known that significant decreases of sunshine produced by heavy air pollution will have consequences on all forms of life and even on the regeneration of polluted fresh waters. Moreover, a considerable part of the pollution of the oceans seems to have its origin in air pollution. The use of pesticides affects not only the soil and living organisms but also the lakes and rivers. These carry much of the polluting substances introduced into their waters into the sea. Ultimately, a considerable proportion of the world's waste and polluting substances goes to the sea; waters not only essential for the food-supply of mankind but also for the regeneration of air and for maintenance of climatic balances. Thus the influence of a given nuisance can afect indirectly many other components of the global environment. The conclusion may be drawn that the protection of the earth's environment must be not only international but also global.

2. ECONOMIC ASPECTS OF THE PROTECTION OF THE ENVIRONMENT

Economic considerations also demand international cooperation in the efforts to safeguard the environment. A government which adopts measures tending to protect the environment on the territory under its jurisdiction may in doing so impose extra charges on its economy. The cost of the anti-pollution measures will necessarily be incorporated in the price of the country's products. If the producer himself supports the additional charge, he will include it directly in his products' prices; if, on the contrary, the anti-pollution measures have been supported by the State or by other public authorities either directly or by according subsidies to the producers, the extra charge will be laid upon the taxpayers and will thus contribute to a rise in the general level of prices of the country. State or any other public expenses for the protection of environment or lack of gain resulting from the non-use of land for immediate economic

purposes (protected areas, national parks, etc.) may have the same effect on the general level of the selling prices of the country's products.

To be sure, it must not be forgotten that the protection of the environment is a long-term investment and that present protective measures resulting in lack of gain may, even under strict economic considerations, prove beneficial in the future. The restoration of a spoiled natural environment may be much more expensive, if possible at all, than preventive measures. Moreover, the preservation of the natural beauties of a country may produce short-term benefits in stimulating tourism. Nevertheless, according to our present economic calculating methods these benefits cannot easily be quantified and it is unlikely that they would be considered as sufficient compensation for the handicap the country's products may meet in international trade competition.

As a consequence, the governments which make an effort to protect the environment, even if they have in mind the environment of their own country in the first place, may risk inferiority in international trade. Their interest will then be to persuade fellow governments to adopt equivalent measures for environmental protection. This will be true, in particular, if the interested States cannot protect their national production by a higher tariff on importation because they are Contracting Parties to international treaties prohibiting any increase of tariffs or even abolishing tariffs on importation of foreign goods (GATT, etc.). The ultimate solution will be the harmonization of national legislation concerning the protection of the environment. Thus, economic aspects of environment protection can also be considered as a factor fostering international cooperation in this field³.

3. IS THERE AN INTERNATIONAL ENVIRONMENTAL LAW?

All the elements which have been recalled and summarized, the psychological, scientific and economic factors, tend towards the same conclusion; measures have to be taken to protect the environment. Very often they will take the form of legal rules; thus, efforts to protect the environment lead to law-making. As has been stated above, international cooperation is inevitable in this field; thus international law will be created. It will take the form either of norms or of institutional rules establishing a legal framework for cooperation.

Hence the question arises whether one can speak of an international environmental law composed of these rules, as a more or less independent branch of law. This has been asserted and, of course, it is always tempting to participate in creating a new scientific discipline. It may even be useful for those involved in the development of a given legal field to gather and compare all the rules concerning the same subject. This latter consideration however, is a merely utilitarian and not a scientific one.

Rules which would compose the "international environmental law" are not different in their nature from those of general international law as their object is to regulate either inter-State relations or the working of inter-governmental organizations. Mostly they tend to influence the behaviour of States in such a way that the biosphere be safeguarded, therein following very much the same method which would be used to safeguard peace or the freedom of international communications. By contrast, international rules concerning the protection of

the environment are technically less revolutionary than those protecting human rights; the latter imply, to a certain extent, a new type of relations governed by international law and at the end the recognition of individuals as subjects of international law. The same statement can be made for international penal law, but certainly not for environmental law.

International environmental law more closely resembles the international law of the sea or international space law in that it consists of a body of rules belonging to international law but characterized by a certain unity of the subject and of the problems treated. In a way, environmental law is less homogeneous than the law of the sea or space law, as these concern a given milieu while the environment is composed of various elements which may be very different from one another, like air and wildlife. In fact, the main link between the rules composing the law of environment is their objective; all the components of the biosphere must be protected, as they form an ecological whole. From this common objective certain common methods and certain principles can be deduced, which may be considered as the essential characteristics of "international environmental law". This system of law is, in conclusion. composed of international public law rules tending to safeguard the essential ecological balance of the biosphere. It is a part of international law, like the law of the sea or the law of treaties, but for convenience it may be treated separately from the rest of international law. The term "international environmental law" will here be used in this sense.

Another point may be added; on the national level experience has proved that it is not possible, nor even desirable, to try to elaborate an environmental policy totally independent from other sectors of national life - social, economic, educational. The requirements of ecology cannot be isolated from these other aspects. Indeed, the protection of the environment must be considered as a sort of philosophy underlying - or which should underlie - most of the activities of the nation's life. This is also true at the international level. Marine pollution cannot be isolated from other aspects of the international regime of the sea; neither can the pollution of international rivers and lakes be remedied outside the framework of the regime of these waters.

Administrative structures, be they national or international, show also an approach tending to integrate ecological requirements into general national or international policies. The main task of organs in charge of the protection of the environment is often to coordinate activities of other agencies, and thus they introduce ecological considerations into those activities. This is what occurs in numerous ministries and agencies at the national level. Similarly, this is also the case with the United Nations Environment Programme, one of the principal attributes of which is to coordinate the activities of all UN specialized agencies and of regional organizations in this field.

4. AN INTERDISCIPLINARY APPROACH TO INTERNATIONAL ENVIRONMENTAL LAW

Like most new fields of international law, the protection of the environment requires cooperation between lawyers and representatives of other branches of science. The law of outer space could be drafted only on the basis of a great amount of data provided lawyers by physicists and astronomers. The elaboration of rules governing the regime of the seas implies the cooperation of lawyers with physicists, biologists, geologists, etc. The number of specialties required for the comprehension of environmental phenomena and for the elaboration of safeguarding measures is still higher and could even be considered as maximal. The drafting of legal norms concerning the protection of the environment can be represented as a chain beginning with studies by biologists and ecologists concerning the ecosystems and their disruptions. The causes of these disruptions, the pollution and the manner in which pollution is propagated will be examined by physicsts, meteorologists, chemists, oceanographers, and other scientists. Technology is needed to develop the methods for combating pollution and nuisances, but the solutions proposed must be approved by sociologists and economists. The task of the latter is to establish for each solution the cost-benefit relationship taking into account short-term as well as long-term effects. While final decision-making is the preserve of politicians, lawyers may help and even influence the politicians in drafting norms or establishing organisational patterns which seem best adapted to all the data in given situations. Thus, lawyers concerned with the formulation of rules appear at the very end of the chain, but they are as necessary as all its other links.

This pattern of interdisciplinary cooperation can be found principally within the national legal systems; this is how legislative or decision-making processes within States generally work or should work. The process may not always be as complete in inter-state relations - some elements of the chain may not result from a study made at the international level but from national contributions. Still, the interdisciplinary approach is essential at the international level too. It also explains why research and the coordination of research are so important in that they monopolise a great part of the international action in the field of environmental protection.

CHAPTER II

THE SOURCES OF INTERNATIONAL ENVIRONMENTAL LAW

International law may be considered as a developing branch of law. Its evolution is due to the transformations of international society and of relations within this society, but also to the extension of human activities to new fields. Among the examples which may be given for the period following the Second World War, a period of rapid changes and development, the international protection of human rights fits in the first category, that is, the transformation of relationships, while the international law of outer space or nuclear law is a result of new human activities. Environmental law derives both from fundamental changes in our concepts concerning the role of the international community and from the extension of human activities (perhaps not in a qualitative but in a quantitative sense), as a consequence of the increase of population and of affluence.

The extension of the scope of international law to new fields which need to be governed by international rules raises the problem of the sources of law. Between the two World Wars this problem had been considered as settled by the enumeration given by Article 38 of the statute of the International Court of Justice, according to which international law is composed of international conventions, international customs, the general principles of law recognized by civilized nations, judicial decisions and the teaching of publicists. Since the end of the Second World War the importance of the general principles - presuming that they have ever been clearly defined - and of doctrine declined. Moreover, international judicial decisions not only have become scarce but their theoretical and practical value is more and more disputed. At the same time new sources of law appeared with the multiplication of intergovernmental organizations: texts issued by their organs, even if they are not mandatory, have a growing place in the development of international rules. Again, the international protection of human rights and the law of outer space illustrate this evolution, but such other fields as the law of development, international economic law, rules concerning the sea-bed and the soil of oceans and, last but not least, the international protection of the environment, also show the trend. The merely formal interpretation of Article 38 of the statute of the ICJ may thus be abandoned for these new fields of international law. For these fields, a more useful distinction would be founded on the nature of the norms or, to be more precise, on the effects they are intended to produce, i.e., first and foremost, whether they are legally binding or not. Moreover, the author of the rule may be important: is it an international organ, an inter-Governmental conference or the contracting parties to a treaty? Therefore, we shall have to examine the norms of international common law, that is to say those which are generally applicable in the absence of special rules, then specific rules concerning environmental protection - mainly treaty provisions and mandatory decisions of international organs - and, lastly, non-mandatory texts - essentially those declarations and recommendations adopted by international organs or intergovernmental conferences which are also called "soft law".

INTERNATIONAL COMMON LAW

International common law results mainly from international custom and from several treaty provisions universally accepted as reflecting existing international law, included in codification conventions, like the 1958 Geneva Convention on the High Seas.

It may be asserted that international common law has no specific norm which can be applied to environmental protection. Its only rule which can be relevant for this purpose is the one prescribing international liability for injury caused to a foreign country in case the environment of the latter has suffered damage.

International liability for ecological damage caused to a foreign State is one of the main principles of international environmental law and will be examined further on at some length. Nevertheless, as it will be demonstrated later on, this principle is in itself far from being effective enough to protect the environment. Besides, the principle cannot be applied to damages caused to such international "commons" as the high seas when no one State has suffered an injury. Just like the evolution which took place in all industrialised countries, where social regulations had to be superimposed upon individual liability in order to ensure the protection of the environment, at the international level too, regulations had to be adopted either in mandatory form or as "soft law" to safeguard the environment.

MANDATORY REGULATIONS

Specific rules concerning the international protection of the environment result mainly from treaties, either multi - or bilateral. Mandatory decisions of international organs are less frequent, as such organs are not often given the power to impose compulsory rules.

1. MULTILATERAL TREATIES

Some conventions are entirely devoted to environmental protection, others contain but a few rules concerning this field but still may be fairly important ones, such as Articles 24 and 25 of the Geneva Convention on the High Sea, April 29, 1958, concerning the prohibition of the pollution of the high sea by oil or by radioactive substances.

In either case, treaties may address themselves either to the whole community of nations or to a more or less limited group of States. The first category consists essentially of regulations tending to protect what may be called the "common heritage of mankind": oceans (e.g., the London Convention for the Prevention of Pollution from Ships, November 2, 1973), endangered species (Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora, March 3, 1973), or outer space (Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, January 27, 1967, Art. IX). Regional cooperation concerning a limited number of States can be useful insofar as it concerns only a given area. It may also allow the adoption of more detailed rules which can then be more easily enforced within the regional framework. The examples which may be cited for this second category of multilateral conventions are numerous: treaties related to specific portions of

the oceans (Oslo Convention for the prevention of marine pollution by dumping from ships and aircraft, February 15, 1972, concerning certain parts of the Atlantic and Arctic Oceans), or certain seas (Helsinki Convention on the protection of the Baltic Sea area, March 22, 1974), rivers and lakes (Convention relating to the protection of Lake Constance against pollution, October 27, 1960) or even the conservation of endangered species living in a certain area (Convention for the conservation of Antarctic Seals, February 11, 1972).

International organizations may have an important role in the drafting of multilateral conventions concerning the protection of the environment. A treaty which has an outstanding importance in the field of the protection of the environment should be mentioned here: the Stockholm Convention of February 19, 1974, among Denmark, Finland, Norway and Sweden, drafted within the framework of the Nordic Council organizes a very concrete legal cooperation system for the prevention of, and reparation for, ecological injuries among the Contracting Parties.

2. BILATERAL TREATIES

Environmental issues concerning two States are normally dealt with in bilateral conventions. Often the protection of the environment or some of its aspects is only part of a general regulation of problems arising form the sharing of borders. The treaty 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" signed at The Hague on April 8, 1960, may serve as an example. The fact that environmental issues are only one of the topics the treaty covers does not reflect the importance attached to these issues by the Contracting Parties; the Dutch-German frontier treaty is particularly interesting with respect to the protection of watercourses against pollution, because it provides for an international commission with real supervisory powers as well as an arbitration procedure. It may even be that the protection of the environment and particularly the control of pollution and nuisances in frontier areas can be better ensured if the scope of the cooperation between neighbouring countries is not restricted to environmental issues. Too often, for geographic reasons - direction of the dominating winds, or of the flow of a river, or of marine currents - one State is always the polluter and the other the victim of the pollution coming from the other side of the frontier. If the scope of the cooperation is enlarged to other problems, the chances will be greater that a reciprocity can be found between their claims.

Cooperation in frontier areas on environmental issues may be one of the most interesting prospects for the future. It may be based on direct relations between local authorities. Different methods can be used in this field. The treaty which is the legal basis for cooperation can be concluded by the two States concerned, the participants in the concrete cooperation being, however, local authorities (agreement between Belgium and the Federal Republic of Germany concerning cooperation in the field of country-planning, of February 3, 1971)⁴. Alternatively, agreements can be concluded by the local authorities themselves (agreement among three Dutch and four German cities concerning the constitution of a working group called "Arbeitsgemeinschaft Rodaland" in order to make a study of problems of common interest and in particular of environmental issues).

Another interesting experience in the field of the protection of the environment is the conclusion of bilateral treaties in order to establish general cooperation in environmental affairs between two States. The US Government made a first step in this direction when it included several provisions encouraging general bilateral cooperation on environmental issues in the May 24, 1972 agreement with the Soviet Union⁵. Another step was the signing in Bonn, on May 9, 1974 of a general agreement on cooperation in environmental affairs between the USA and the Federal Republic of Germany⁶.

In its preamble the US-German agreement stresses that cooperation between the two governments is of mutual advantage in coping with similar problems in each country and is important in meeting each Government's responsibilities for the maintenance of the global environment. According to its provisions, the Contracting Parties will maintain and enhance bilateral cooperation in the field of environmental affairs on the basis of equality, reciprocity and mutual benefit. Cooperation may be undertaken pertaining to environmental quality management in mutually agreed areas such as pollution problems of mutual concern, assessment of environmental quality, discussion of environmental policies, practices and organization, exchange of experience on the design and cooperation in the development of environmental information systems, training in environmental protection and environmental impact evaluations. Meetings, implementation of agreed cooperative projects, exchange of information and data and coordination of specific research activities are the principal forms of cooperation to be undertaken. It is also provided that the Contracting Parties will use their best efforts to harmonize their environmental policies and practices to the maximum extent practicable and to promote broad international harmonization of effective measures to prevent and control environmental pollution.

Article IV of the Agreement concerns the economic aspect of environmental protection. It favors application of the "Polluter Pays Principle", providing that the Contracting Parties will use their best efforts to ensure that the cost of carrying out pollution prevention and control measures will be included in the cost of goods and services which cause pollution in production or consumption. In addition, the use of environmental protective measures as non-tariff barriers to trade must be prevented and trade distortions resulting from differences in the environmental practices and procedures of the two countries should be mitigated by means of consultations.

One of the last agreements concerning general cooperation in the field of the protection of environment is the exchange of letters which has taken place between the Commission of the European Communities and the US Government. It provides for exchange of information and of knowledge, joint organization of conferences and symposia, and periodic meetings between representatives of the two Parties⁷.

3. DECISIONS OF INTERNATIONAL BODIES

Binding resolutions of international organizations have the same effect for the Member States as treaties to which they are parties. As environmental protection often requires day-to-day cooperation, the role of these decisions can be very important. Actually, an international body can adopt binding resolutions only if

it has been empowered by its statute to do so. As States are accustomed to jealously keep for themselves ultimate decisions in different affairs with which they are concerned, they rarely grant such a power to international organs. In the whole system of the United Nations Organization only the Security Council is entitled to address mandatory decisions to the member States, and among the most important regional organisations there are but two institutions which theoretically have this power, the Council of the Organization for Economic Cooperation and Development (OECD) and three of the principal organs of the European Communities: the Council, the Commission and the Court of Justice. Of course, the Security Council, which is a specialized organ for the maintenance of international peace and security, is not very likely to intervene in environmental matters. Thus, we have to examine two mainly regional intergovernmental organizations, namely OECD and the European Communities.

According to Article 5 of the Convention on the OECD, signed in Paris on December 14, 1960, the Organisation - i.e. its Council, which is the body from which all its acts derive - may make decisions which, except as otherwise provided, shall be binding on all the Member States. It also may make recommendations to members, which are without legally binding force. The Council of the OECD has adopted quite a series of resolutions concerning the protection of the environment. However, most of them are not mandatory decisions but are only recommendations, the only decision in this field being related to a fairly technical question, the protection of the environment by the control of polychlorinated biphenyls (decision C (73) adopted on February 13, 1973).

The European Communities, and particularly two of their main institutions, the Council and the Commission, can adopt regulations and directives, make decisions and formulate recommendations or opinions (Article 189 of the Treaty establishing the European Economic Community).

According to Article 189 of the EEC Treaty, the mandatory texts adopted by the Council or the Commission can be regulations, directives or decisions. Regulations have a general application and are binding in every respect and directly applicable in each Member State. Directives bind any Member State to which they are addressed as to the result to be achieved, while leaving to domestic agencies a competence as to the forms and means. Decisions are binding in every respect for the addressees named therein. The decisions of the Court of Justice, also a main institution, are binding too, but until now they do not seem to have played any role in environmental affairs.

Unfortunately, the protection of the environment as such is not included in the original sphere of action of the Communities, so that it was uncertain at the beginning whether "ratione materiae" measures of that nature could be taken at a general level. Nevertheless, the sphere of competence of all of the three Communities includes elements which allow a limited scope of action with respect to particular points of environmental concern. The European Coal and Steel Community has received the task, according to Article 55 of the Paris Treaty of April 18, 1951, to take measures in order to enhance the security of workers in the coal mining and steel industries. Euratom is charged with the drafting of rules concerning the protection of the population and of workers against nuclear radiation (Articles 30-39 of the Treaty establishing Euratom of

March 25, 1957). In both cases the powers of the Communities are limited in scope, and are related to very particular aspects of the protection of the environment. However, the most important of the three Communities, the European Economic Community, is still less favored as to environmental protection; no provision of the Rome Treaty of March 25, 1957, by which the EEC was established, is directly related to any aspect of environmental protection. It must not be forgotten how new environmental concern is. The awareness of an ecological danger became general only in the sixties, and intergovernmental organizations having a fairly large sphere of competence included environmental issues on their agenda for the first time only toward the end of that decade. It is no wonder in these circumstances that the authors of the Rome Treaties ignored the problem.

Still it has generally been felt important for the EEC to take its part in the effort to protect the environment in Europe. A possible approach was to use certain provisions of the Rome Treaty, the aim of which was to prevent distortion in the conditions of competition in the Common Market, and especially Articles 100 to 102, which empower the Council to issue directives "for the approximation of such legislative and administrative provisions of the Member States as have a direct incidence on the establishment or functioning of the Common Market". The direct objective of the possible action was thus to harmonize rules of national law in order to equalize the charges supported by the different Member States as a consequence of measures they had taken in order to protect the environment. This solution was, however, only a temporary one. It facilitated the convergence of existing laws but there were no new actions independent of any existing law, ant still less did it empower the European Community to draft a global environmental policy the necessity of which seemed to be evident.

Another solution could have been put to use: the possibility provided by Article 235 of the Treaty, according to which, if an action appears necessary on behalf of the Community in order to realize one of the objectives of the Common Market and if the Treaty does not provide the means of action which would be required, the Council may take appropriate measures, upon a unanimous vote on a proposal of the Commission and after consultation with the European Parliament. Of course, it also would have been possible, at least theoretically, to amend the Treaty. Neither of these means, however, have been used.

A temporary solution was found by the Heads of State or Government of the Member States when they met in Paris on 19 to 20 October 1972. Referring to Article 2 of the Rome Treaty, which assigns to the Community the task to promote a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living, they declared that "economic expansion is not an end in itself: its first aim should be to enable disparities in living conditions to be reduced ... It should result in an improvement in the quality of life as well as in standards of living. As befits the genius of Europe, particular attention will be given to intangible values and to protecting the environment so that progress may really be put at the service of mankind". The Programme of Action of the European Communities was established on this legal basis⁸.

Even before adoption of this declaration and the drafting of the Programme of Action, the Council of the Communities had issued several directives concerning the permissible sound level and the exhaust system of motor vehicles⁹ and

regarding air pollution by gases emitted by engines of motor vehicles¹⁰. It may be assumed that the legal texts implementing the Programme of Action will generally take the form of directives rather than that of regulations¹¹. However, other forms have also been used such as decisions¹², resolutions¹³, recommendations¹⁴, declarations¹⁵ or even agreements signed by representatives of the Member States meeting in the Council¹⁶.

RECOMMENDATIONS AND DECLARATIONS

Recommendations and declarations issued either by intergovernmental organizations or by international conferences generally have no binding force. They constitute what is called "soft law", i.e., rules which have to be considered as law insofar as they fix norms with which States should comply, but which cannot be enforced in the traditional meaning of the term¹⁷.

A general view of the non-mandatory texts issued by governments either in the framework of international organs or at international conferences shows how different in nature they may be. Differences may exist not only among texts drafted in different frameworks or on different occasions but also within the same text. As a consequence, these texts must be qualified not according to their denomination or form, but also according to the aim and the nature of the different provisions they include, taking into account the intention of the organ which issued them.

On this basis, a distinction can be made between three sorts of non-binding texts. It may constitute an *opinion* of an international organ or conference as to the conduct to be adopted by the States which are its members or which participate in it, a kind of *directive* (but the latter term, having been appropriated by the Treaty instituting the European Economic Community, has come to have a precise meaning). Secondly, they may constitute a *programme of action* which the drafting organ proposes to itself or which a conference submits to the participating States. Lastly, non-binding texts may have a constitutive character as to new norms: they may then be called *declarations of principles*.

1. DIRECTIVE RECOMMENDATIONS

International organisations are often criticised for having only the power to address non-binding, directive recommendations to their Member States. Of course, this weakness results from the fact that intergovernmental organisations can only do what they have been empowered to do by their Member States. However, it is frequently asked whether such texts are efficient or useful at all.

Without going deeply into this problem, it should be recalled that as long as they have not been given other means to express their will, the issuance of non-binding resolutions remains the only way for international bodies to propose to Member States what they should do. The Member States, however, jealously maintain their sovereignty by retaining the ultimate right to evaluate concrete circumstances when joining international organizations. Hence, the texts adopted by most international organizations have a directive but not a binding character.

Nevertheless, it must not be forgotten that even if directive recommendations are not mandatory, i.e. if Member States are free to comply or not to comply with them, the States cannot completely ignore them. On the one hand, a recommendation constitutes a justification of the attitude of the State having conformed to it; on the other, it may be recalled that States join international organizations of their own volition: if they systematically refuse to accept the recommendations of its organs, one may wonder why they still retain membership.

Directive recommendations do play an important role in international environmental law. The UN General Assembly as well as specialised agencies like UNESCO, WHO, WMO, FAO, IMCO, and IAEA address recommendations to their Member States, as do most regional organizations which are involved in activities concerning the international protection of environment such as OECD, the Council of Europe, CMEA, the UN Economic Commission for Europe, etc. Even the organs of the European Communities, which do have the power to impose binding rules, have addressed recommendations to their Member States in certain environmental matters¹⁸.

It may also be recalled that the Stockholm Conference adopted a whole series of recommendations of a directive character. The 109 recommendations constituting the Action Plan for the Human Environment are either totally directive or may rather be considered a programme of action. As far as they address themselves to the participating States, they can probably be considered directive recommendations. The Resolution on Institutional and Financial Arrangements, those concerning the World Environment Day, the nuclear weapons tests and the Second UN Conference on the Human Environment are certainly directive recommendations.

2, PROGRAMMES OF ACTION

Non-binding texts can constitute programmes for both the drafting organ and for the Member States. In reality however, it is difficult to draw a clear-cut distinction between organs and Member States because, except in merely administrative affairs, the latter must support international action.

The Action Plan for the Human Environment, adopted in Stockholm in June 1972, illustrates this working method, the principal merits of which are to define as clearly as possible objectives for international action, as well as to determine the best means to realize them. Most of the 109 Recommendations which constitute the Stockholm Action Plan designate the addressee: Governments, the UN Secretary General, specialized agencies, or even regional organisations 19. The Stockholm Conference could be considered as a strong indication of world public opinion, and consequently could address itself to practically anybody.

The Programme of Action of the European Communities on the Environment²⁰ is also a non-binding programme but is quite different from the Stockholm Action Plan. Its scope is narrower and the actions it proposes are generally defined with precision, and are even programmed to be completed by a time-table. Morever, it is addressed principally to the Commission of the Communities which is responsible for implementation. It may be considered a general guideline for Commission action in environmental matters. Even in a

field like the protection of the waters of the Rhine basin against pollution, (where the principal role is given to the signatory States of the Berne Convention of April 29, 1963, which sets up an International Commission for the Protection of the Rhine against Pollution, and where a convention has been drafted by another European intergovernmental organization, the Council of Europe²¹), the Communities Programme of Action addresses no recommendation to other international bodies. However, it is recognized that the projects to which this programme will give rise should in some cases be carried out at the Community level, and in others carried out by the Member States²².

It is interesting to note that in adopting the Programme of Action, none of the legal means provided by Article 189 of the Treaty instituting the EEC (regulations, directives, decisions, recommendations, opinions) has formally been used. The Programme has been approved by a "Declaration of the Council of the European Communities and of the representatives of the Governments of the Member States meeting in the Council"²²; the principles and the objectives of a Community environment policy and the general description of the projects to be undertaken at Community level have been annexed to this Declaration. Whereas the form of this text may seem unusual, it can be recalled that the Member States' representatives may take part in certain duties acting at the same time as the Council of the Community, such as the signature of agreements with non-member States. In any case, the choice of an unusual form seems to emphasize the non-binding character of the Programme of Action.

3. DECLARATIONS OF PRINCIPLES

Non-binding texts may put forth either general principles of international protection of the environment or specific principles concerning components of the environment (air, fresh water, wildlife). They are numerous and play an important role in international environmental law.

The most important text proclaiming general principles of international protection of the environment is the Stockholm Declaration of June 1972, adopted by the UN Conference on the Human Environment. Composed of a short preamble, a proclamation and 26 principles, this text may be considered as the general basis for any future international action concerning the protection of the environment.

Several UN Assembly resolutions have confirmed one or more of the Stockholm principles²⁴. The Charter of Economic Rights and Duties of States, adopted as a resolution by the General Assembly on December 13, 1974²⁵ gives in its Article 30 an important summary of the duties of the States as to the protection of the environment:

"The protection, preservation and the enhancement of the environment for the present and future generations is the responsibility of all States. All States shall endeavour to establish their own environmental and developmental policies in conformity with such responsibility. The environmental policies of all States should enhance and not adversely affect the present and future development potential of developing countries. All States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the

environment of other States or of areas beyond the limits of national jurisdiction. All States should cooperate in evolving international norms and regulations in the field of the environment."

Another declaration of principles is included in the Programme of Action of the European Communities: Part I, titles I and II of this document proclaim the objectives and the principles of the Community environmental policy²⁶. Some of these principles have been inspired by the Stockholm Declaration, but several others are new, for example, the rule that the best environmental policy consists of prevention of pollution or nuisances at their sources rather than subsequent counteraction.

The declarations of principles can also have a narrower scope, relating to given environmental problems instead of general rules for protecting the environment. The Council of Europe drafted a whole series of "Charters" proclaiming the main principles concerning the protection and the management of such natural resources as air, water and soil. (The "Declaration of principles of air pollution control²⁷", the European Water Charter²⁸ and the European Soil Charter²⁹.)

The real meaning of the declarations of principles can only be understood in the context of the development of law. Each legal order is based upon a system of social values accepted by the great majority of the subjects of that order. Consequently, the aim of law has been to project these values. For convenience we shall call these values "ethics" (in the sense in which the late Professor Georges Scelle used this term when he stated that law is a conjunction of ethics and power)³⁰.

The formation of ethics is the result of a rather mysterious process. New ethics may develop as a consequence of new ideas, of changes in the self images that human beings perceive or may arise even under the influence of economic necessities or scientific progress. At a given stage of its formation, the new value may be recognized as a social one, i.e. the protection of which is important for the society. When this arises, legal rules should be drafted to ensure this protection.

In the course of this evolution, it may be useful that certain of the new social values be formulated finally while others are developed progressively through successive, more precise formulations, prior to transformation into legal rules. In a legal order, such as international law, which is without a permanent legislative power and where norms are drafted by the subjects of the law themselves, this process may even prove more important than in better organised, more institutionalised legal systems, e.g. in States.

Thus in different legal systems and particularly in international law, declarations of principles play the important role of revealing and formulating new social values which, at a later stage, can become objects of legal norms. Such an evolution has taken place in all other new problem areas that have become concerns of international law since the Second World War. This development began with the Universal Declaration of Human Rights, (adopted on December 10, 1948, by the UN General Assembly) a declaration of principles formulating for the first time at the international level the fundamental rights and freedoms of human beings. Two years later, on November 4, 1950, the European

Convention on Human Rights was signed. It transformed into legally binding norms a great many of the principles of the UN Declaration. The scope of the European Convention is merely regional; at the universal level, the two UN Covenants on Human Rights adopted on December 16, 1966 transformed most of the 1948 principles into mandatory rules. In the interim, several treaties implementing special aspects of the international protection of human rights, all based on the Universal Declaration, have been drafted (Treaties on the status of refugees, on political rights of women, on the age of marriage, on discrimination, etc.)³¹.

The evolutionary process was even more systematic in the field of the law of outer space. Bases were provided by UN General Assembly Resolution 1721 (XVI) of December 20, 1961, and 1962 (XVIII) of December 13, 1963 proclaiming the fundamental principles to be applied to space activities. These were in a non-binding form, i.e. as a declaration of principles. Subsequently, upon this basis, the 1967 Treaty on the principles governing the activities of States in the exploration and use of outer space, including the moon and other celestial bodies, was drafted. In a further stage, some of the norms of the 1967 Treaty have been more fully developed in the form of independent treaties (Agreement on the rescue of astronauts, the return of astronauts and return of objects launched into outer space of April 22, 1968; Convention on international liability for damage caused by space objects of March 22, 1972, Convention on registration of objects launched into space of January 14, 1975).

Thus, once the fundamental principles of a new field are proclaimed, even in a non-binding form, the evolution can take different directions, either to the drafting of a general Convention which transforms all, or a great many, of the principles into mandatory norms, or to the conclusion of treaties which develop and implement single principles, or, lastly, to the drafting of regional treaties dealing with either general or special matters. Of course, two or more of the different forms of development can be combined. The most logical pattern of evolution would be the conclusion, first of a general Convention, then of regional treaties and, finally, of agreements concerning specific problems either in a universal or in a regional framework.

In the field of the international protection of the environment, the evolution did not strictly follow, until now, this pattern. Nevertheless, the different declarations of principles have been followed by the elaboration of special treaties in certain matters. It may be assumed that all the conventions which have been drafted after the Stockholm Declaration have been more or less inspired by its principles. Some of them refer to it explicitly (Paris Convention of June 4, 1974, for the prevention of marine pollution from land-based sources, preamble, par. 3; Nordic Environmental Protection Convention of February 19, 1974, concluding comments). It may also be submitted that the adoption of the European Water Charter by the Council of Europe in May 1968 was the first step on the road leading to the drafting of the European Convention for the protection of international watercourses against pollution.

Declarations of principles can affect the development of law in another way, by influencing the drafting of municipal legislation on environmental matters. It is not at all certain that international declarations of principles are forceful enough to influence national legislators to act. Nevertheless, the principles proclaimed at

international levels will have some influence. For example, German legislation on air pollution control was said to have been influenced by the Declaration of Principles on air pollution control issued by the Council of Europe on March 8, 1968. A definite advantage of this method is that different municipal governments, if inspired by the same principles, will develop similar legislation.

Finally, declarations of principles can be a basis for further action of the international body which adopted them or for other ones. The Stockholm Action Plan for the Human Environment is a natural consequence of the Declaration of principles adopted by the same Conference. In environmental matters, the UN General Assembly has often referred to the Stockholm principles (e.g. Resolution 3133 (XXVIII) adopted on January 17, 1974, concerning the protection of the marine environment). Similarly, Stockholm principles are often quoted by other international bodies. The European Communites' Programme of Action states among the principles of a community environment policy that:

"In accordance with the Declaration of the UN Conference on the Human Environment adopted in Stockholm, care should be taken to ensure that activities carried out in one State do not cause any degradation of the environment in another State".

In the same manner, the Recommendation of the Council of OECD concerning the principles relating to transfrontier pollution, adopted on November 14, 1974³², develops some of the issues of the Stockholm Declaration.

In conclusion, it may be said that new sources of international law will emerge from new fields like the international protection of the environment. The exact role of these new sources is often difficult to define, as their effects are mostly indirect. However, the influence of soft law upon the development of international law cannot be denied.

It may be added that today international law does not appear to always follow traditional legal patterns. Presently, direct cooperation in technical fields is playing a growing role in international relations. The task of lawyers is now to organise this cooperation. In doing so, the different forms of soft law may be as useful, if not more so, than hard-law rules.

PART II

FUNDAMENTAL PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW

It has been stressed that international law may be considered as a developing system of law. As a consequence, its rules are not as well assessed as are the norms of more developed legal systems, like penal law or civil law. For this reason, the principles which constitute its base - sovereignty, independence and equality of States, etc. - play a particularly important role, as, in the absence of more precise rules, reference must be made to them.

Environmental law is still less developed than other aspects of international law, which is understandable when considering its recent genesis. As a result, the utmost importance is placed upon general principles, even while the complexities of these principles are not fully assessed. As a matter of fact, what could be called "fundamental principles of international environmental law" includes not only generally recognized legal concepts like international responsibility for environmental harm, but also requirements such as prevention, or international cooperation for the protection of the environment, and even trends such as growing awareness in safeguarding the biosphere, or the need to draft specific rules to prevent pollutions or to save endangered species. Hence, the term "fundamental principles of international environmental law" will be used here in this specific sense, i.e., not as a well-established, static concept but as a quickly developing one.

These principles stand for the right to information and due proceedings in environmental matters, the international liability for environmental damages, prevention as a basis for international regulation and international cooperation.

CHAPTER III

THE RIGHT TO INFORMATION AND DUE PROCESS

One of the basic requirements for pollution control is that interested parties receive adequate information on the status of the environment, in order to ascertain the dangers which might threaten it. If the dangers are real, potential victims may then be able to take adequate protective measures. Additionally, due proceedings should then be open to them.

These rights for information and for due proceedings may be implemented in international law as a consequence of the principle of equality of States, as polluting nations cannot be given unfair advantage over unaware victim States. Also, in a system based upon equality of States, victim States must be given timely opportunity to protest the environmental damage, rather than merely accepting it.

But equality with regard to the consequences of ecological injury should also be extended to equality for individuals. One may consider that the right for individuals to equality derives from international declarations and from treaties protecting human rights³³. Moreover, Principle 1 of the Stockholm Declaration on Human Environment proclaims that man has the fundamental right to equality "in an environment of a quality that permits a life of dignity and well-being". It may also be stated that equality of individuals in this regard is a consequence of the application of the principle of equality of States. Indeed, discrimination against nationals of a foreign State suffering environmental injury may affect the foreign State itself. As a matter of fact, the State of the "polluter" can use various legal means to help its own nationals who are victims of pollution (previous consultation proceedings, regulation of the polluting activities, administrative and even penal sanctions against the polluter). On the contrary, if the victim is a foreigner living in a foreign State, the latter would be entitled merely to action for compensation of the injury, if the injury can be compensated at all.

THE RIGHT TO INFORMATION

It should be expected that Governments will inform all other States of the territory, territorial waters or air-space which can be affected by acts originating within that States' jurisdiction.

1. IS THERE A GENERAL OBLIGATION TO INFORM?

International practice shows that often States in the basins of international watercourses cooperate in flood control by communicating regularly about events likely to create floods or dangerous rises of water levels in their territory³⁴. Recommendation no. 18 of the Stockholm Action Plan tends to promote the establishment of an effective world-wide natural disaster warning system. It would be almost inconceivable that a government possessing information concerning a natural disaster threatening another country would not warn that country. Still, it may be questioned whether such information is due when the environmental damage results from human activities.

Such information is generally given when military manoeuvres or other activities endanger human life or security on the seas³⁵. A special application of the rule concerns open-air nuclear tests. However, the endeavour to impose a general obligation to inform concerned States of environmentally harmful activities failed at the Stockholm Conference³⁶ (principally because of a political dispute between Argentina and Brazil). The UN General Assembly needed to develop further action in the matter and, consequently, adopted a Resolution on December 15, 1972, recognizing that cooperation between States on the field of the environment as recommended in principles 21 and 22 of the Stockholm Declaration will be "effectively achieved if official and public knowledge is provided on the technical data relating to the work to be carried out by States within their national jurisdiction, with a view to avoiding significant harm that may occur in the environment of the adjacent area"³⁷.

One year after this Resolution, (which can be considered as a regression from the draft principle proposed to the Stockholm Conference), the UN General Assembly adopted on December 13, 1973, a new Resolution³⁸, relating to

cooperation in the field of the environment concerning natural resources shared by two or more States. It declares that the cooperation must be developed on the basis of a system of information and prior consultations within the framework of the normal relations existing between the concerned States. Further, the Resolution requested the Governing Council of UNEP to take duly into account this recommendation and to report on measures adopted for its implementation.

Although both resolutions were non-binding and their merits were hardly revolutionary, the Brazilian Government vehemently protested in a memorandum against the "attribution of supranational powers to the Governing Council of UNEP" alleging that it results from an exceedingly broad interpretation of the resolutions. The Brazilian Government asserted that if "prior consultations" were accepted, any State, by making use of technical pretexts of various nature, could interfere with the activities of another State³⁹. However, the Brazilian memorandum did not specify whether the Brazilian Government was against all forms of information or only against "consultations", the latter including the possibility of discussing the projected measure while the former means only the transmission of data concerning projects which could be harmful for the environment outside the frontiers of the State.

Nevertheless, the Charter of Economic Rights and Duties of States, adopted by the UN General Assembly on December 12, 1974, as Resolution 3281 (XXIX) declares in its Article 3 that "in the exploitation of natural resources shared by two or more countries, each State must cooperate on the basis of a system of information and prior consultations in order to achieve optimum use of such resources without causing damage to the legitimate interest of others".

In conclusion, one could hardly speak at present of an existing rule in positive international law which would impose the duty upon States to inform those who could be concerned, of activities which can be prejudicial to their environment or affect their environmental policy. There is certainly more than a moral obligation for Member States of the UN to cooperate and in order to do so, to set up a system of information and prior consultations. Strict legal obligations exist, moreover, by virtue of treaty provisions and inside regional organisations.

2. EXISTING TREATY PROVISIONS AND RULES OF REGIONAL ORGANIZATIONS

Among existing treaty provisions, the two Conventions of London, of 1972 and 1973, drafted by IMCO, are particularly important as, if signed and ratified, they will be applied to all the States in the world. The International Convention for the Prevention of Pollution from Ships, concluded on November 2, 1973, provides in Article 8 that a report of an incident at sea involving harmful substances shall be made without delay to the fullest extent possible. Each Party to the Convention shall make all arrangements necessary for an appropriate officer or agency to receive and process all reports on such incidents and notify IMCO with complete details of such arrangements for circulation to other Parties and Member States of the Organization. Whenever a Party receives a report, it shall relay it without delay to the administration of the ship involved and to any other State which may be affected 40. The 1972 Convention on the Dumping of

Wastes at Sea, on the other hand, provides that the nature and the quantity of waste, the dumping of which has been authorized, as well as the place, the date and the method of the dumping will be communicated to IMCO and, eventually, to the other Contracting Parties⁴¹.

As to regional organizations, it may be recalled that Article XIV of the African Convention on the Conservation of Nature and Natural Resources signed in Algiers on September 15, 1968, provides that if development plans drafted by the Contracting Parties may affect natural resources of another State, the latter will be consulted. It is important to emphasize that this convention fits in the framework of the Organisation of African Unity, the member States of which are developing countries.

Another treaty providing for information, which has been drafted in a regional framework is the Agreement of the Representatives of the Governments of the Member States of the Europen Communities of March 5, 1973. It concerns information to be provided to the Commission and to the Member States on urgent measures concerning the protection of the environment. The preamble of this text recognizes the particular importance for the European Communities of the reduction of pollution and nuisances and the urgency of taking measures to combate such pollution and nuisances. It affirms the necessity of establishing a procedure for providing information concerning the intentions of Member States in the field of the protection of the environment and in pollution control. Such information must be given as early as possible before the measures envisaged occur. The first paragraph of the agreement itself provides that the Commission of the European Communities shall be informed as soon as possible of any draft legislative, regulatory or administrative measure and of any international initiative concerning the protection or improvement of the environment which may directly affect the functioning of the Common Market or is relevant to the Communities' programme for the reduction of pollution and nuisances and the protection of the natural environment, or is of particular interest to the Communities and the Member States from the point of view of the protection of public health or of the natural environment, particularly where the measure may have repercussions for other Member States. The Commission will, as soon as possible, communicate to the Governments of the Member States all information acquired pursuant to the Agreement. The draft legislative, regulatory or administrative measures referred to shall only be adopted if the Commission does not notify the Governments concerned, within two months of receiving such information, of its intention to submit to the Council proposals to adopt Community measures on this subject. Such proposals must take into account the aims of the national measures in question from the point of view of environmental protection. In appropriate cases, which have to be determined at the time of defining the programme for the abatement of pollution and nuisances and the protection of natural environment, this procedure will be extended to draft measures liable to affect the implementation of the Communities' programme for the reduction of pollution and nuisances. By way of exception, legislative, regulatory or administrative measures may be adopted if these are urgently necessary for serious reasons of safety or health, but the texts concerning such measures must be immediately communicated to the Commission, which will transmit them to the Governments of the other Member States as soon as possible⁴².

These provisions aim at the harmonization of legislation in the sense of Article 100 of the Rome Treaty, concerning the approximation of laws which have a direct incidence on the establishment or functioning of the Common Market. However, they have been given the unusual form of an "agreement" between the representatives of the Member States and not a "directive" as foreseen in Article 100. The fact that they concern environmental matters may explain why the usual procedure has not been applied. Nevertheless, the impact of the Agreement of March 5, 1975 has been rather important. In two years approximately 110 notifications have been received by the EEC Commission from nearly all Member States of the Communities. It shows that stronger ties between particular States may lead to the establishment of more advanced procedures.

A somewhat different procedure has been adopted in another international but non-regional organization, the OECD, where the Member States are the principal industrialized countries having comparable economic systems. The Council of OECD adopted, by decision coming into force in May 1971, a procedure on "measures for control of substances affecting man or his environment". By this system, any Member State which is preparing to put into effect, or has recently taken, a measure controlling the use of certain persistent toxic chemicals, which might affect to a substantial extent the trade or economic interest of other Member countries, has the moral responsibility to notify those other countries. Also, any country that considered its trade to be possibly affected by another country's action, can call for an international consultation⁴³. The procedure wasinitially limited to measures concerning chemicals in the environment and was more aimed at economic than at environmental targets. Still, one may ask whether it could be used as an early warning system in order to prevent injury to a State's environment from activities occurring outside that State's frontiers. Nevertheless, 31 such notifications have thus far been received and one consultation was held on PCB's. The system will be reviewed by the Council in the light of the experience gained and the benefits derived from it by the Member States⁴⁴. Finally, according to an informal procedure, information concerning activities which could be prejudicial to the environment seem to be communicated through the OECD committees concerned.

Another information system was established in a still narrower geographic framework, the Nordic Council, which consists of the Scandinavian States. Established in Stockholm in February 19, 1974, by the Nordic Environmental Protection Convention, this system is not a usual inter-state system. Its basic thrust is that 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 (called in the Convention "examining authority") of that State the question of the permissibility of such activitities, including the question of measures to prevent damage. In order to make this possibility effective, it is provided that if the "examining authority" finds that the activities entail or may entail nuisance of significance in another Contracting State, it shall, if proclamation or publication is required in cases of that nature, send as soon as possible a copy of these documents to the authority of the other State which is entrusted with the task of safeguarding general environmental interests called "supervisory authority", and afford it the opportunity of giving its opinion. Moreover, the "supervisory authority" of the concerned State shall be kept informed of any developments that may be of interest to it (Article 5). Thus, the information

system consists of direct cooperation between State authorities belonging to different countries. These authorities need not be ministries of Foreign Affairs but can even be local authorities. One of the aims of the procedure is to allow individuals to become informed of activities in the other contracting States which could be harmful to their environment. Article 7 provides that the "supervisory authority" of the potential victim's State, if it finds it necessary to do so on account of public or private interests, shall publish communications from the examining authority in the local newspaper or in some other suitable manner. It is to be hoped that this rather revolutionary information system, which involves not only State organs but also private persons, may prove efficient in practice.

Several multilateral treaties provide for mutual information of environmental harm at the regional level only in regard to certain activities. Article 1 of the Convention of October 27, 1960 between the German Länder Baden-Württemberg and Bayern, Austria, and Switzerland concerning the protection of the Lake Constance against pollution, requires that the Contracting Parties cooperate in this field and provides that the riparian States will communicate to each other in due time the plans concerning the use of the lake's water which may affect the interests of other riparian States as to salubrity. Moreover, these plans will not be executed as far as they have not been discussed by the riparian States, unless there is an emergency or unless the concerned States have agreed with their execution.

The example of the Bonn Agreement of June 9, 1969, for cooperation in dealing with pollution of the North Sea by oil may also be noted. Its Article 5 provides for the duty of Contracting Parties to inform other Contracting Parties concerned with oil floating on the sea or of oil casualties which could endanger their coasts or other interests. It may be observed, however, that unlike in the Lake of Constance Treaty, here the duty to inform concerns general environmental danger, and not only activities carried out by the States themselves or taking place on their territory.

One may add that Article 11 of the Draft European Convention for the Protection of International Watercourses against pollution, elaborated in the framework of the Council of Europe, but not yet signed, provides that as soon as a sudden increase in pollution is recorded, the Contracting Parties riparian to the same watercourse shall immediately warn each other, and shall take unilaterally or jointly all measures in their power to avert injurious consequences or to limit the extent thereof, having recourse to the early warning system which must be set up by the international commission to be created under the Convention.

Similarly, by a Resolution adopted on March 26, 1971 on Air Pollution in Frontier Areas, the Committee of Ministers of the Council of Europe recommends⁴⁵ that the governments of member States of the Council of Europe ensure that the competent authorities inform each other in due time of any project for installations liable to pollute the atmosphere beyond the frontier. Moreover, the competent authorities beyond the frontier should be able to comment on such projects. These comments should be given the same consideration and treatment as if made by inhabitants of the country where the plant is situated or planned.

The trend of international environmental law towards a general obligation of notice is 'particularly well represented by the Recommendation on principles concerning transfrontier pollution adopted by the Council of OECD on November 14, 1974⁴⁶. According to this Recommendation, Member countries should be guided in their environmental policy, among other principles, by that of information and consultation. It means that, prior to the initiation in a country of works or undertakings which might create a significant risk of transfrontier pollution, that country should give early information to other countries which are, or may be, affected. It should provide these countries with relevant information and data and should invite their comments. Moreover, countries should enter into consultation on an existing or foreseeable transfrontier pollution problem at the request of a country which is or may be directly affected. They should refrain from carrying out projects or activities which might create a significant risk of transfrontier pollution without first informing the countries which are or may be affected and consultations should be held in the best spirit of cooperation and good neighbourliness. This should not enable the concerned countries, however, to unreasonably delay or impede the activities or projects on which consultations are taking place.

3. RIGHTS OF INDIVIDUALS

In regard to individuals, one might wonder whether the "right to freedom of expression" interpreted in Article 18 of the UN International Covenant on Civil and Political Rights as including the freedom for individuals to seek, receive and impart information regardless of frontiers, can be considered as implying the right to receive information concerning acts which might cause them environmental harm, and if, especially, it implies the right to get such information from foreign countries. It doesn't appear, however, that such a rule results from positive international law. The Austrian Administrative Court (Verwaltungsgericht) rejected the request for relief of German plaintiffs living near the Austrian frontier who complained of not having been consulted as were individuals living on the Austrian side of the border prior to the construction of the Salzburg airport, and this probably did not violate existing law rules⁴⁷. Still. the decision was criticized and the problem found a solution in the adoption of a treaty signed by Austria and Germany on December 19, 196748. Moreover, an inquiry concerning frontier areas in several European countries shows that in reality the inhabitants of foreign countries living near the frontier are relatively often consulted before the beginning of polluting activities or are, at least, informed in order to be able to formulate objections⁴⁹. This practice seems to be consistent with the general trend of transfrontier relations in border areas as well as with the emerging principles of international environmental law.

THE RIGHT TO DUE PROCESS

A country suffering damage caused by environmentally harmful acts produced in another country is entitled to reparation. The international responsibility for such acts is the second fundamental principle of international environmental law and will be treated in the following chapter. However, international action, at inter-State level or not, may be undertaken before the damage has been caused in order to prevent it. Articles 3 and 4 of the Nordic Environmental Protection Convention of February 19, 1974 are a good example of this mingling of prevention and reparation. They also demonstrate both the inter-State and the individual levels in existing proceedings:

"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.

Article 4: Each State shall appoint a special authority (supervisory authority) to be entrusted with the task of safeguarding general environmental interests insofar 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 activitites 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."

Of course, it must not be forgotten that the Nordic Environmental Protection Convention is rather unique; it is a convention which could only be drafted because of the similarity of aims, conceptions and legal systems inherent in the Scandinavian States. Still, it shows what could and should be achieved in the field of the protection of environment. Such a system insures to foreign State authorities as well as to foreign individuals a real right to non-discriminatory due proceedings.

The Recommendation of the Council of OECD on principles concerning tranfrontier pollution, adopted on November 14, 1974⁵⁰ also summarizes the aims of international law. According to this text, countries should make every effort to introduce, where not already in existence, a system affording equal right of hearing. This would mean that whenever a project, contemplated by public authorities, concerning a new activity or a course of conduct that could create a significant risk of transfrontier pollution, the persons affected by such pollution should have the same rights of standing in judicial or administrative proceedings in the polluting country as nationals of that country. Nevertheless, participation in consultation procedures prior to activities that may cause pollution is not yet an absolute international legal obligation.

There is however, no doubt about the obligation to grant redress for environmental harm already caused. Here the traditional rules of general international law are applied. In the present circumstances, the procedure followed may be either under internal law, international law or at both levels simultaneously.

1. COMPENSATION PROCEDURE FOR TRANSFRONTIER ENVIRONMENTAL PREJUDICE IN DOMESTIC LAW SYSTEMS

Under internal law provisions, the victim of damage caused by environmental harm can address himself directly to either the national courts of his own country or of the country where the harmful activity took place. Either solution presents certain difficulties. The identification of the party responsible for the nuisance or pollution is a major problem. For example, for damages caused by sonic booms where the aircraft cannot be seen, or in the case of cumulative pollution of the air or of rivers (pollution which results from different activities by different plants or persons), the problem of discovering who is primarily liable, or what the liability of each party is, can be most difficult. The problem becomes progressively more difficult as more data must be collected in a foreign country.

If the identification obstacle is overcome, the choice of competent jurisdiction concerning the domicile of the polluter is next. This choice can offer certain advantages, especially concerning the execution of an eventual judgement. Nevetheless, inconveniences are also encountered. Suing in a foreign jurisdiction raises numerous psychological problems such as the reluctance to sue in a foreign court, the inability to understand foreign procedure, and linguistic problems. Among the legal problems, standing to sue may raise special difficulties, especially for nature protection associations, which may have standing in one country but not in another. Additional legal problems can be raised by the need to deposit a sum of money as "cautio judicatum solvi" or by the conditions of legal assistance 1.2. Also, the court hearing the case can encounter difficulties in fixing the extent of damage located in a foreign country. Finally other legal problems, such as the collection of evidence or the evaluation of the compensation, may also be encountered.

Theoretically, it would seem preferable to select a court with jurisdiction over the place where the effects of the pollution were felt. The victim of the pollution would then be in a better position, and the judges themselves would be better equipped to establish the facts for both practical and procedural reasons. However, it is necessary that the judgment against the polluter be capable of being executed in the foreign country, and this depends on the relationship between the States of the claimant and of the polluter.

This condition can be met by adequate treaty provisions. Unfortunately, existing provisions and even recent ones, are not always adapted to the needs of the protection of the environment. A recent exemple shows that the Convention on Jurisdiction and the Enforcement of Judgments can, instead of helping the victims of environmentally harmful activities find redress through their own tribunals, oblige them to sue the authors of the harm in the country where the activitites arose, i.e. in less favorable conditions than those of common international private law. This occurred when a Dutch horticulturist and an association aiming to combat the pollution of the Rhine filed a claim for reparation against the Potassium Mines of Alsace, in the Circuit Court of Rotterdam. The Mine company was a French State-owned company, which continually dumped salt into the Rhine, polluting the water flowing into Holland. However, the Circuit Court of Rotterdam rejected the claim, holding that the Convention on Jurisdiction and the Enforcement of Civil and

Commercial Judgments, signed on September 27, 1968 by the Member States of the European Communities prevented it from having jurisdiction. According to Article 5 of this Convention "Any defendant domiciled in a Contracting State may, in another Contracting State, be sued in(3) the court of the place where the tortious act occurred, in matters of tort or quasi tort". This provision has been interpreted by the Circuit Court of Rotterdam in a restrictive sense, which considered that the general rule adopted by the Convention is that of the "actor sequitur forum rei" and the permission to sue in other countries must be looked upon as an exception. Thus the word "tortious" in the expression "the place where the tortious act occurred" must be understood as act "causing a tort", i.e. the author of the pollution had to be sued in his own country⁵³.

It may be added that the EEC Convention on Jurisdiction had been drafted before the "environmental era" and its authors principally had in mind the consequences of road accidents. The particular requirements of the environment ought to be taken into consideration especially regarding transfrontier pollution when interpreting existing treaties and drafting new ones.

Even if jurisdiction is to be found in tribunals of the victim's country, there still is the problem of jurisdictional immunity when the polluter is a State organ. However, this disadvantage does not outweigh the advantages of that solution.

An example of compensation for damages resulting from pollution given by the jurisdiction of the victim's courts, may be found in the Brussels Convention on Civil Liability for Oil Pollution Damage. Under Article IX, where pollution has caused 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. Of course, reasonable notice of any such action shall be given to the defendant. This provision is necessarily completed by Article X according to which any enforceable judgment given by a court with jurisdiction in accordance with Article IX shall be recognized in any Contracting State and shall be enforceable in each Contracting State as soon as the formalities required in that State have been complied with. Moreover, the formalities shall not permit the merits of the case to be reopened 54.

The principle that the plaintiff can also sue in his own national court against the effects of pollution of foreign origin, has also been confirmed by a judgment of the Oberlandesgericht of Saarbrücken, in the case of *Poro v. the Coal Mines of Lorraine*⁵⁵. The German court held that it had jurisdiction for an action for compensation brought by a German against the Coal Mines of Lorraine, a State-owned French company, for damages caused to his estate by fumes emitted by a power plant located in French territory.

This case also demonstates that, even if jurisdiction is recognized for obtaining compensation for pollution damages caused by activities in a foreign country, the problem of the choice of law for the court to apply remains. The court must decide whether to apply the law of the country where the harmful effects of the pollution were felt or the law of the country where the polluting activity arose. The Court of Appeals which gave the last judgment in the *Poro* case stated that legislation most favorable to the victim must be chosen. In this case the court

chose French legislation, according to which compensation can be awarded even without proof of fault on behalf of the owner of the damaging instrumentality (Article 1384, Code Civil).

It may be questionable whether international private law should require that the legislative rules applied to transfrontier pollution cases must be those most favourable to the victims. However, certainly no discrimination against the victims of the pollution can be practiced. On this subject, it is interesting to note Article 3 of the Nordic Environmental Protection Convention which provides that

"The question of compensation shall not be judged by rules which are less favorable to the injured party than the rules of compensation of the State in which the activities are being carried out".

The two Conventions on Liability in the Field of Nuclear Energy show a similar trend. Article 13 of the Convention on Third Party Liability in the Field of Nuclear Energy of July 29, 1960, drafted in the framework of the European Nuclear Energy Agency, provides that for nuclear damages, jurisdiction shall lie only with the courts competent in accordance with the legislation of the State in whose territory the nuclear installation is situated. As a corollary, Article 14 adds that national law of the court having jurisdiction over claims arising out of a nuclear incident shall be applied without any discrimination based upon nationality, domicile or residence. Articles XI and XIII of the Vienna Convention on Civil Liability for Nuclear Damage of May 21, 1963 proclaim similar principles.

2. INTERNATIONAL PROCEDURE FOR COMPENSATION FOR TRANSFRONTIER ENVIRONMENTAL PREJUDICE

Pollution victims may also request that their own government intervene in order to obtain compensation for environmental damages. Recourse to this procedure may be had either before, during or after any other legal action is brought in the country of the polluter.

Usually, however, in international law, when a Government intervenes in favor of a national, it exercises diplomatic protection, which implies certain conditions: effective nationality of the plaintiff and prior exhaustion of domestic remedies in the State where its nationals suffered damage. These requirements are not a bar to intervention on behalf of the victim of environmental injury. As a matter of fact, when introducing a claim for environmental damage with the government of the country where the pollution comes from, the victim's Government does not intervene on behalf of its own nationals (thus, it is not exercising diplomatic protection) but rather is asserting its own right to have its territory free from damage caused by acts committed in a foreign jurisdiction. In these circumstances it is immaterial whether the victim of the pollution is a national or not or whether a prior attempt has been made to obtain a remedy for damages in the courts of the polluter. It is also evident that a State can, on its own initiative, and without the need for a complaint from an inhabitant of its own territory, demand reparation from another State for environmental damage. This is true not only when the property of the State itself has been damaged but also when the damage has been caused to inhabitants of its territory.

These considerations are equally valid for cases of damage caused by pollution to ships on the high seas or aircraft flying over the high seas. The flag State can intervene to assert its international right to have its flag respected ⁵⁶.

However, international practice shows that States do not regularly intervene in cases of environmental damages suffered on their territory: the number of diplomatic interventions concerning environmental claims seems to be rather limited. The attitude which governments adopt in given cases is often subordinated to considerations which for the most part are not legal in nature. It appears that those relatively rare cases where satisfaction has been obtained for transnational environmental harms concern only especially serious kinds of pollution. Low level pollution is generally insufficient to set into motion the international compensation procedure.

An international claim may be settled either by diplomatic means: negotiations, mediation, conciliation, by arbitration or by the International Court of Justice. In the latter cases the international judge or arbitrator can order the environmentally harmful acts suspended while he considers the substance of the complaint. For example, the International Court of Justice in the case of the French Nuclear Tests in the Pacific stated, that "the French Government should avoid nuclear tests causing the deposit of radioactive fall-out on Australian territory" ⁵⁷. Of course, after having considered the substance of the complaint, the judge or arbitrator can decide that the acts of pollution constitute a violation of international law and that they must cease for the future. This was the opinion given by the arbitrators in the *Trail Smelter* case between the US and Canada on the basic question raised by the compromise ⁵⁸.

In cases where the liability of a State is determined for damages caused to another, the judge or the arbitrators can award damages to the plaintiff. Thus, the Arbitration Commission in the *Trail Smelter* case in its first Award of April 6, 1938, granted an indemnity to the United States⁵⁹.

CHAPTER IV

INTERNATIONAL LIABILITY FOR ENVIRONMENTAL DAMAGES

PRINCIPLES

There is, in general international law, no specific rule forbidding environmentally harmful acitivities. Principle 6 of the Stockholm Declaration on Human Environment of 1972 proclaims that the discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems. However, this is a requirement, formulated in very general terms, rather than a legal rule. Moreover, it is inserted into a "soft law" text, which has no binding character. Hence, it can hardly be considered as codifying or creating a legal obligation in international law.

Thus, injury caused to the environment is not illegal in itself in present positive international law. However, in certain cases the environmental injury will cause private damages and consequently, international liability plays a role in the protection of the environment, as there is international liability for damages caused to other States or to their nationals by environmentally harmful activities. Thus, the pattern of the legal situation in general international law is the following. An act having taken place under the jurisdiction of State A results in damage to the environment on the territory, in the territorial waters or the air-space of State B. State A will be liable in consequence of this damage. State A cannot argue that the harmful act has only taken place within the scope of its territorial sovereignty. A general rule, recognized by the International Court of Justice, provides that every State has the obligation not to knowingly allow its territory to be used for acts contrary to the rights of other States⁶⁰. Even without the existence of such a general obligation, the principle prohibiting abuse of rights could be applied to cases where the consequence of acts having taken place wholly within national territory amounts to a violation of the rights of other States (particularly the right to have territory respected)⁶¹.

The liability of States for environmental damages caused to other States is generally recognized. Principle 21 of the Stockholm Declaration puts forward an existing rule in stating that:

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

One of the principles of the Community Environment Policy adopted by the nine Member States of the EEC in November 1973, as an introduction to the Programme of Action of the European Communities on the Environment, refers to the Stockholm Declaration in proclaiming that, in accordance with the Declaration, care should be taken to ensure that activities carried out in one State do not cause any degradation of the environment in another State⁶².

Recently, the Charter of Economic Rights and Duties of States, adopted as Resolution 3281 (XXIX) by the UN General Assembly on December 12, 1974, stressed, in its Article 30 that:

"All States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction".

The principle of liability for environmental harm has been recognized even by Governments which least favor international action in the field of the protection of environment. Brazil's protest against any duty to inform other States of threatening environment harm has been reported above⁶³. Now, even Brazil has accepted the liability principle. In the Memorandum Concerning General Assembly Resolution 3129 (XXVIII), addressed to the Executive Director of UNEP on March 22, 1974, the Brazilian Government recalls the Declaration of Asuncion on the utilization of international rivers of June 3, 1971, according to which each State may utilize the waters of international rivers of successive course, on condition that it does not cause significant damage to another State in the basin. In the opinion of the Brazilian Government, this "principle of juridical responsibility" implies the obligation not to cause significant damage to third parties and "to be fully responsible for such damage if it occurs"⁶⁴.

Thus, there seems to be no doubt about the international liability for damages caused to the environment of other States. However, Principle 21 of the Stockholm Declaration has in view not only this kind of damage but also that to the environment of areas beyond the limits of national jurisdiction, i.e. the high seas, the air-space above it, the outer space, or Antarctica. It is clear that there is an important difference between the traditional views and those extending the liability to damages caused not to a given State or its nationals but to the common property of mankind. Hence, it is necessary to examine the two different aspects of international liability for environmental damages: the traditional one, implying prejudice suffered by States, and new aspects of the international liability.

LIABILITY UNDER GENERAL INTERNATIONAL LAW

It must be well understood that, when we speak of damages suffered by States, we also include damages to nationals, non-national inhabitants, or ships or aircraft flying the state's flag outside the limits of national jurisdiction. Whether the latter seek first to obtain compensation for the damage suffered by means of municipal redress is irrelevant to the principle itself. Finally, the State under the jurisdiction of which the damaging acts have taken place is internationally responsible that compensation be given to those who suffered injury. It must be

noted that in international law the beneficiary of the compensation is the State of the victim, and not the victim itself.

1: TRAIL SMELTER CASE

This point has been illustrated by the well-know two-part Trail Smelter Case arbitration award involving Canada and the United States⁶⁵. In 1896, a smelter was built at Trail, in British Columbia, Canada, where zinc and lead were smelted in large quantities. In 1906, the Consolidated Mining and Smelting Co of Canada, Limited, obtained a charter of incorporation from the Canadian authorities and that company acquired the smelter plant at Trail. The plants emitted sulphur dioxide fumes in growing quantities, the amount of which varied between 10,000 and 20,000 tons per month. It may be noted that one ton of sulphur dioxide or SO2is substantially the equivalent of half a ton of sulphur. From 1925, at least, to the end of 1931, damage occurred in American territory only about seven miles distant. It was brought to the attention of Trail Smelter that damage was being done to American property. The first formal complaint was made in 1926 by a farmer whose farm was located a few miles south of the boundary line. This was followed by others and the Trail Smelter proceeded to negotiate with the complaining property owners, with a view towards settlement. Settlement in different amounts were made with a number of farmers. However, in 1928, an association known as the "Citizens' Protective Association" was formed. It consisted of individuals suffering damage not yet recompensed.

In June, 1927, the case was first taken officially to the Government of the United States. A communication was sent from the Consul General of the US in Ottawa, to the Government of the Dominion of Canada. In December 1917, the US Government proposed to the Canadian Government that problems growing out of the operating of the Smelter at Trail should be referred to the International Joint Commission which had been set up in application of the Convention of Jaanuary 11, 1909, between the US and Great Britain respecting boundary water and frontier questions⁶⁶. On February 28, 1931, the International Joint Commission delivered its Report finding that all past damages and all damages up to and including January 1, 1932, amounted to 350.000 dollars. Moreover, the Commission recommended a method of indemnifying persons in Washington State for damage which might be caused by operations of the Trail Smelter after January 1, 1932, and also recommended that the Consolidated Mining and Smelting Co. of Canada, Ltd., should make certain changes and additions to its plant for the purpose of reducing the amount of sulphur discharged from the stacks.

However, two years after the signing of the International Joint Commission's Report, the US Government made a representation to the Canadian Government that existing condititons were entirely unsatisfactory and that damage was still occurring. At the end of renewed diplomatic negotiations, a convention was signed, at Ottawa, on April 15, 1935, for the settlement of difficulties arising from operation of the Smelter at Trail. According to this Convention, the Government of Canada agreed to pay 350.000 dollars to the US Government in payment of all damage which had occurred in the US, prior to January 1. 1932, as a result of the operation of the Trail Smelter. Moreover, the two Governments agreed to constitute a tribunal consisting of an independent chairman and two

national members for the purpose of deciding the following questions:

- (1) Whether damage caused by the Trail Smelter in the State of Washington has occurred since January 1, 1932, and, if so, what indemnity should be paid therefor?
- (2) If such damage has been caused, whether the Trail Smelter should be required to refrain from causing damage in the State of Washington in the future and, if so, to what extent?
- (3) In the light of the answer to the preceding question, what measures or regime, if any, should be adopted or maintained by the Trail Smelter?
- (4) What indemnity or compensation, if any, should be paid on account of any decision rendered by the Tribunal pursuant to the preceeding questions?

Article IV added that the Tribunal had to apply

"law and practice followed in dealing with cognate questions in the USA as well as international law and practice, and shall give consideration to the desire of the high contracting parties to reach a solution just to all parties concerned".

In a first decision on April 16, 1938, the Tribunal concluded that damage caused by the Trail Smelter in the State of Washington had occurred since the beginning of 1932 and up to October 1, 1937. The complete and final indemnity and compensation for all damage which occurred between such dates was fixed at 78.000 dollars. The Tribunal decided to determine the fact of existence of damage, if any, occurring after October 1, 1937, in its final award. It also decided that until this award the Trail Smelter would refrain to a certain extent from causing damage. The Tribunal decided that it was unable to answer the question of a permanent program for Trial Smelter to adopt with the information placed before it. Thus, it established a temporary regime and decided to continue further examination of the case for the purpose of a final award.

The second and final decision was reported to the American and Canadian Governments on March 11, 1941. The Tribunal had been requested to reconsider its first decision with respect to expenditures incurred by the US during the period January 1, 1932 to June 30, 1936 as the US Government held that it was entitled to a higher indemnity than that which had been allowed. However, the Tribunal denied this petition, holding, after having considered at some length the problem of the revision of arbitral awards, that in the present case "the prior determination had res judicata effect." Furthermore, it was argued that damage had occurred in the State of Washington since October 1, 1937, as a consequence of the continued emission of sulphur dioxide by the Canadian Smelters. However, it was held that the US Government had failed to prove that any fumigation between October 1937, and October 1, 1940, had caused injury to crops, trees or other property. Similarly, the Tribunal rejected the American claim for indemnity for costs of investigations.

What makes the Trail Smelter arbitration a paramount case for international environmental law is Part Three, wherein the Tribunal faced the issue of whether the Trail Smelter should be required to refrain from causing future damage in the State of Washington and, if so to what extent. The first problem examined by the Tribunal was whether the question should be answered on the basis of United States law or on the basis of international law. However, the Tribunal found that there was no need to solve this problem, as the law followed in the United States in dealing with the quasi-sovereign rights of the States of the Union, in the matter of air pollution, was in conformity with the general rules of international law. After having examined pronouncements by leading authorities and international decisions concerning the duty of a State to respect other States and their territory, the Tribunal found that the real difficulty was to determine what is deemed to constitute an injurious act. Several decisions concerning territorial relations, given by the Federal Court of Switzerland (Canton of Soleure v. /Canton of Argovie) and by the Supreme Court of the United States (State of Missouri v. / State of Illinois, 200 US 496,521; State of New York v. / State of New Jersey, 256 US 296, 309; State of Georgia v./ Tennessee Copper Co. and Ducktown Sulphur, Copper and Iron Co. Ltd., 206 US 230) induced the Tribunal to declare that:

"the above decisions, taken as a whole, constitute an adequate basis for its conclusions, namely, 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 or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence". 67

However, the Tribunal stressed that the decisions of the US Supreme Court which are the basis of these conclusions are decisions in equity. Nevertheless, it held that the Dominion of Canada was responsible in international law for the conduct of the Trail Smelter. It was therefore the duty of the Canadian Government to conform this conduct with the obligations of Canada under international law. In consequence, the Trail Smelter had to refrain from causing any further damage in the State of Washington.

Having thus decided the question of international liability for transfrontier pollution, the Tribunal still had to answer a further question: what measures or regime if any, should be adopted and maintained by the Trail Smelter? In order to be able to answer this question, the Tribunal had enlisted, after the first decision, technical consultants to establish a report on the circumstances of the pollution by the Trail Smelter. The investigations made it clear that in the carrying out of a regime, automatic recorders had to be located and maintained to aid the control of the emission of fumes and to provide data for observation of the effect of the controls. The program itself consists of the regulation of the operation of the Smelter and of maximum emission of sulphur dioxide from its stacks.

The Tribunal also considered that since it had the power to establish a regime, it had also the power to provide for alteration, modification or suspension of such regime, responsive to future conditions. Thus, it decided that, if any time after the end of 1942 either the American or the Canadian Government requested an

amendment or suspension of the regime prescribed by the award, and the other Government declined to agree to such a request, a Commission will be appointed for the purpose of considering and acting upon such request. Further, the Tribunal recommended that the Canadian Government continue the maintenance of experimental and observation work.

One remaining question faced the Tribunal: what indemnity or compensation, if any, should be paid on account of any decision rendered by the Tribunal for future damages. The Tribunal was of opinion that the prescribed regime would probably result in the prevention of any future material damage in the State of Washington. However, the Tribunal fixed compensation to be paid in case any damage did occur in the future.

Finally, the Tribunal provided that investigators appointed by or on behalf of either Government, whether jointly or severally, and the members of the Commission which eventually would be constituted later on, should be permitted at all reasonable times to inspect the operations of the Smelter and to enter upon and inspect any of the properties in the State of Washington which may be claimed to be affected by fumes. The Tribunal expressed the strong hope that any investigations which the Governments may undertake in the future in connection with the matters dealt with in the award, would be conducted jointly.

Many conclusions may be drawn from the Trail Smelter Arbitration. It is a very valuable precedent for the international law of the environment as it establishes once and for all the principle of international liability for damages caused to the environment of another State. As a consequence of this principle, compensation has to be paid for such damage.

A second point concerns the nature of the liability. The fumes were emitted by a privatly-owned plant, thus the Canadian Government was responsible not for an act of one of its organs but for an omission; Canadian officials had the duty to see that private persons act in conformity with the international obligations of Canada. This point is of capital importance in the fixing of international duties of States in environmental matters.

Finally, it must be stressed that the Tribunal used the opportunity given it to establish a regime for the future. In doing so, it implicitly recognized that the problem of transfrontier pollution could not be solved by merely paying compensation for the damages occurring on the other side of the frontier. Regulation had to be established at the international level and the Tribunal saw fit to establish it 68. However, even in establishing this regulation, the Tribunal did not consider that its task was finally achieved. It recognized that the regime issued from this regulation might need modification or suspension. This was a very clear understanding of the problem which transfrontier pollution and in general the international protection of the environment raises; international regulations are necessary, but there is also need for a follow-up, as well as for following measures of control which must be taken jointly by the concerned States. Regulation and the establishment of special regimes are only the beginning of a permanent international cooperation, which is the only remedy for environmental harms. Ultimately, the basis of the evolution of international legal rules concerning the protection of the environment may be found in the award given in the Trail Smelter case.

2. LAKE LANOUX CASE

There is also a consideration of transfrontier pollution in the Lake Lanoux case. This case was brought before an arbitration tribunal set up by agreement between the French and Spanish Governments. The Spanish Government contended that a French project for the diversion of water from the lake was in conflict with the Treaty of Bayonne and with additional modifications to the treaty. This treaty safeguards interests of individuals in the downstream State threatened by works or concessions in the upstream State which are likely to change the flow or the volume of the water. The French Government claimed that the project would replace the diverted lake water with water taken from a French river. Although the Spanish Government did not claim that the water flowing to Spain would be of a different quality from the diverted water, the arbitral Tribunal raised the point:

"On aurait pu soutenir que les travaux auraient pour conséquence une pollution définitive des eaux du Carol, ou que les eaux restituées auraient une composition chimique ou une température, ou telle autre caractéristique pouvant porter préjudice aux intérêts espagnols. L'Espagne aurait alors pu prétendre qu'il était porté atteinte, contrairement à l'Acte additionnel, à ses droits. Ni le dossier, ni les débats de cette affaire ne portent la trace d'une telle allégation" 69.

However, as the Spanish Government did not assert that the French project would result in pollution of the water, the award did not go any further. More importantly, the claim concerned only the application of given treaty provisions and not general international law rules. Therefore, the award does not yield any specific principle on transfrontier environmental injury under general international law 70.

RECENT DEVELOPMENT OF INTERNATIONAL LIABILITY FOR ENVIRONMENTAL DAMAGES

As has been recalled previously, Principle 21 of the Stockholm Declaration proclaims that States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of their national jurisdiction. According to Principle 22, States are entrusted with the duty to cooperate in order to further develop the international law regarding liability and compensation for the victims of pollution and other environmental damage, caused by activities within the State jurisdiction or control, to areas beyond their jurisdiction.

There are far-reaching implications for both principles. International liability exists not only for damages caused to other States, to their territory or their nationals, but also for injury suffered by the environment in areas which may be considered as the common property of mankind: high seas, Antarctica, outer space, etc. Also, the Stockholm Declaration aims at the development of international liability concerning compensation for the victims of pollution.

Thus, when speaking of the recent development of international liability for environmental injury, two different aspects must be examined; firstly, liability for damage to the environment of international areas, secondly, the development of international responsibility in order to ensure a better compensation for the victims of pollution.

1. RESPONSIBILITY FOR ENVIRONMENTAL DAMAGE TO THE "COMMONS"

The principle that a State can be liable for a damage caused to the environment of an international area and not simply to that of another State may seem very far from reality. Indeed, it could be considered that only in an utopian system a State could for example be obliged to pay compensation for the destruction of plankton in a given area of the high seas by the dumping of toxic substances from a ship flying its flag. Even if liability for such an act were accepted, to whom the compensation for the injury should be paid remains in question. Moreover, such liability implies the presence of a prosecutor in charge of international action against the States damaging the environment of common areas. Theoretically this role can be played at the international level either by an international institution, or by every State, i.e. by means of "actio popularis".

The first solution seems rather remote today. It may be recalled that such a system supposes a very advanced degree of institutionalisation of international life, as within the European Communities, where such a role is committed to the Commission. Yet even in the system of the European Convention on Human Rights there is no public prosecutor, the Contracting Parties or the victims of the violation are entrusted with the initiative of petition against breaches of the Convention.

As to the second solution, the question of whether "actio popularis" exists at all in general international law, (outside specific treaty provisions like Article 24 of the European Convention on Huma Rights⁷¹) is a rather controversial one. It is still more doubtful that such an action would be recognized as accceptable if undertaken by one or more Governments, outside any treaty provision and any specific interest, exclusively on behalf of the common concern of mankind to safeguard the biosphere⁷². Nevertheless, it could be desirable to work out how, in a more remote future an "actio popularis" could be operative in the framework of a world-wide intergovernmental organization, following the pattern of Article 35 of the UN Charter in international security matters⁷³.

However, even in positive international law, liability for injury to the environment of the "commons" is not wholly inexistent. There are rules, adopted by treaties for the protection of all components of the "commons". For the high seas, Article 24 and 25 of the 1958 Geneva Convention on the High Seas provide that every State shall draw up regulations to prevent pollution of the seas by oil and take measures to prevent pollution from the dumping of radio-active waste. Moreover, Article 1 par. 2 of the Convention on Fishing and Conservation of the Living Resources of the High Seas imposes the duty for all States to adopt such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas. For Antarctica, Article IX of the Treaty of Washington, charges the Representatives of the Contracting Parties to formulate, consider and recommend to their Governments measures regarding preservation and conservation of living resources in Antarctica among the measures in furtherance of the principles and objectives of the Treaty. As to outer space, according to Article 9 of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, States shall pursue studies of outer space, including the Moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination and also adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter⁷⁴. Where necessary, States will have to adopt appropriate measures for this purpose. Finally, the 1963 Treaty banning nuclear weapon tests, which explicitly prohibits nuclear explosions in the atmosphere, in outer space or underwater including high seas, may be added to these provisions.

Despite the fact that the obligations which result from these provisions are rather general and that they do not aim at the complete protection of the environment of the high seas, Antarctica, outer space and air-space above the high seas, it is beyond doubt that their effect is to yield some protection to those areas. Apart from Article IX of the Antarctica Treaty, they are also directly binding. Thus, theoretically, violation of these rules can give rise to international liability and consequently, any other Contracting State can initiate an international action against the breaching State, according to the principles of general international law for the enforcement of treaties. In reality, however, States have not been willing to start international proceedings on the basis of these provisions, with the possible exception of the Nuclear Test Ban Treaty, where considerable political concern can be involved. In order to take such action, the rules protecting the environment of common areas should be much more specific.

More specific provisions can be found in several recent international instruments aiming at the prevention of pollution of the sea. The most general of these is a paragraph of the Declaration concerning the Problems of the Sea, issued by the Caribbean Countries at Santo Domingo, on June 9, 1972. The Declaration states that it is the duty of every State to refrain from performing acts which may pollute the sea and its seabed, either inside or outside its respective jurisdictions, and it adds:

"The international responsibility of physical or juridical persons damaging the marine environment is recognized. With regard to this matter the drawing up of an international agreement, preferably of a world-wide scope, is desirable "5".

The Oslo Convention for the Prevention of Marine Pollution by Dumping from ships and aircraft, signed by twelve States on February 15, 1972, provides, in Article 1, that the Contracting Parties pledge themselves to take all possible steps to prevent the pollution of the sea by substances that 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. A similar provision is included in Article 1 of the London Convention on the Dumping of Wastes at Sea signed on November 13, 1972. However, this Convention faces explicitly the problem of liability for breach of its norms, without solving it:

"In accordance with the principles of international law regarding State responsibility for damage for 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." (Article 10)

A regional treaty concerning the pollution of the sea, the Convention on the Protection of the Marine Environment of the Baltic Sea Area, signed on March 22, 1974, provides that the Contracting Parties undertake jointly and as soon as possible, to develop and accept rules concerning responsibility for damage resulting from acts or omissions in contravention of the Convention, "including, inter alia, limits of responsibility, criteria and procedures for the determination of liability and available remedies" (Article 17).

The London Convention for the Prevention of Pollution from Ships (November 2, 1973) also includes a very general obligation. According to Article 1, the Parties to the Convention undertake to give effect to its provisions in order to prevent the pollution of the marine environment by the discharge of harmful substances or effluents containing such substances.

A common feature of the four conventions cited is that the main resulting obligation for the Contracting States is to propose rules for individuals under their jurisdiction, and to make the individuals respect these rules. It is characteristic that some of the organs of the Contracting States themselves, generally warships and State-owned vessels, are exempted from the requirements of the treaties (Oslo Convention, Article 15 par. 6; London Dumping Convention, Article VII par 4; Baltic Sea Convention, Article 17; London Pollution Convention, Article 3). Thus, immediate liability for the breach of these Conventions still concerns not States, but individuals. Article 4 of the 1973 London Convention is particularly interesting from this point of views:

- "1. Any violation of the requirements of the present Convention shall be prohibited and sanctions shall be established therefor under the law of the Administration of the ship concerned wherever the violation occurs. If the Administration is informed of such a violation and is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken as soon as possible, in accordance with its law.
- 2. Any violation of the requirements of the present Convention within the jurisdiction of any Party to the Convention shall be prohibited and sanctions shall be established therefor under the law of that Party. Whenever such a violation occurs, that Party shall either:
 - a) cause proceedings to be taken in accordance with its law; or
 - b) furnish to the Administration of the ship such information and evidence as may be in its possession that a violation has occurred......
- The penalties specified under the law of a Party pursuant to the present Article shall be adequate in severity to discourage violations of the present Convention and shall be equally severe irrespective of where the violations occur".

The responsibility of the Contracting States is not mentioned in the last treaty and seems to be subsidiary when compared to that of the individuals under their jurisdiction. However, Article 10 of the Convention and Protocol II provide for

rules concerning the settlement of inter-State disputes. This seems to imply that in certain cases a Contracting State can be held responsible for the non-execution of the Convention. Indeed, it is in conformity with general rules of international law that a State has the duty to punish internationally illegal acts committed under its jurisdiction; if it omits to do so, it will be held itself responsible under international law.

The same method has been used when drafting the Paris Convention for the Prevention of Marine Pollution from Land-Based Sources, signed on June 4, 1974. In Article 1 of this treaty, the Contracting Parties pledge themselves to take all possible steps to prevent pollution of the sea and declare that they shall individually and jointly adopt measures to combat marine pollution from land-based sources. At the same time, Article 21 and Annex B to the Convention provide for the settlement of disputes.

In a different field, that of the protection of international watercourses against pollution, the European Convention drafted by the Council of Europe, but not yet signed, is nearer to the traditional concept of international responsibility. According to its Article 3, each Contracting Party undertakes, with regard to international watercourses, to take all measures required to prevent new forms of water pollution or any increase in the degree of existing water pollution, as well as measures aiming at the gradual reduction of existing water pollution. Article 4 adds that each Contracting Party shall take all measures appropriate for maintaining the quality of the waters of international watercourses at, or for raising it to, a level not lower than specific standards determined by the Draft Convention. Two other provisions show that in this more traditional system, immediate State responsibility is involved. On one hand, according to Article 6, the provisions of Article 3 and 4 may not be invoked against a Contracting Party to the extent that the latter is prevented, as a result of water pollution having its origin in the territory of a non-Contracting State, from ensuring their full application. This implies that a Contracting Party is liable for water pollution having its origin in its own territory. On the other hand, the Draft Convention provides for the settlement of disputes by arbitration. It is stated in the same Draft Convention in Article 21:

"The provisions of this Convention shall not affect the rules applicable under general international law to any liability of States for damage caused by water pollution."

This article implies that the Convention concerns itself mainly with injury to international watercourses, (including the liability of the Contracting States for such injuries) and not for damage caused to third persons by water pollution.

It may be concluded that there is a trend in international environmental law towards international liability for injury to the common areas of mankind, independent of damages which States or their nationals can suffer directly. However, at the present time, the international liability for such injuries is not easily operative. This is true even when general treaty provisions are applicable. Liability for environmental injury to common areas results mainly from specific treaty obligations. However, in recent developments these rules usually do not prescribe immediate obligations for the Contracting Parties but instead provide for States to promulgate rules for individuals under their jurisdiction and to

enforce their respect. As a consequence, the State liability is at stake only when the Government omits to so promulgate. One may wonder whether in such cases of State liability pecuniary compensation is due and if so to whom, or whether the State having violated the treaty by non-execution must be compelled to comply with it. The Draft European Convention for the Protection of International Watercourses against pollution may announce a somewhat different evolution, more in conformity with the traditional concept of international liability.

Anyway, there can be no doubt that there is a trend in international law towards international liability for damages caused exclusively to the commons. The world's public opinion supports this trend as has been shown by the "Enskeri" case in March 1975. The "Enskeri", a Finnish tanker owned by the Finnish State Oil Company Neste, was entrusted to dump, on March 29, 1975, seven tons of arsenic in the South Atlantic. Although the Finnish Government was not a Contracting Party to any international treaty prohibiting such dumping, it decided that the dumping was subject to authorization. A number of Latin-American States, among them Argentina, Brazil and Uruguay, protested with the UN Secretary-General against the pollution of the sea and, finally, the Finnish Government informed the Neste Company that the dumping could not take place 16.

2. COMPENSATION FOR THE VICTIMS OF POLLUTION

The most characteristic feature of recent international treaty provisions concerning the compensation to the victims of pollution is that liability is considered not as international responsibility, i.e. as an inter-state relation, but as civil liability to be settled directly and most often through procedures before internal courts 77.

Four international treaties relating to liability for nuclear damage, drafted between 1960 and 1963 have adopted the same principle as to the compensation to victims. These are the Paris Convention on Third Party Liability in the Field of Nuclear Energy, signed on July 29, 1960, drafted in the framework of OECD, and a Convention supplementary to it of January 31, 1963; the Vienna Convention on Civil Liability for Nuclear Damage of May 21, 1963, drafted in the framework of the International Atomic Energy Agency; and the Brussels Convention on the Liability of Operators of Nuclear Ships of May 25, 1962. The basic rule is for liability for the operator of the nuclear installation, be it a private corporation or government agency, in the event of nuclear damage. The Brussels Convention stresses expressly that the liability is absolute (Article II), but the other conventions can also be understood as implicitly establishing a form of strict liability 78. In all cases the liability for one nuclear incident is limited: to 15 million European Monetary Agreement Units in the Paris Convention, to 5 million US dollars in the Vienna Convention and to 1500 million francs in the Brussels Convention. In all three conventions the operator is required to have and maintain insurance or other financial security. Finally, all the conventions include rules concerning the jurisdiction by civil courts and ensuring the enforcement of judgments in other Contracting States.

Several years after the drafting of the treaties concerning nuclear damage, the Torrey Canyon case raised the problem of accidental pollution of the sea by oil. This Liberian tanker was stranded on the south-west coast of England on March 18, 1967 and approximately 100,000 tons of crude oil were spilled into the sea. The total damage caused by the contamination of a large part of the British as well as the French coast has been estimated at some 6 million Pounds⁷⁹. As a direct result of this accident, IMCO drafted a convention on Civil Liability for Oil Pollution Damage, which was signed in Brussels, on November 29, 1969. Some basic principles of the Convention are similar to those included in the treaties on nuclear damage. According to Article III, only one person, the owner of the ship, is responsible and he 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. The liability is not based on the fault of any person, but certain exemptions have been made; if the owner proves that the damage resulted from acts of war, acts or omissions done by a third party with the intent to cause damage, or the negligence of authorities responsible for the maintenance of lights or other navigational aids (Article III). The owner of a ship is entitled to limit his liability in respect of any one incident to an aggregate amount of 2,000 Poincaré francs for each ton of the ship's tonnage. However, this aggregate amount cannot exceed 210 million francs. As in the Conventions relating to nuclear damage, insurance or other financial security is required (Article VII). Jurisdiction and enforcement of judgments rendered in the Contracting States are also provided for 80.

The Brussels Convention needed adjustment for two reasons. On the one hand, compensation had to be provided to victims in cases where the total damage exceeded the limitation of the ship-owners liability set in the 1969 Convention or, to a certain extent, where the damage is not subject to compensation at all under this Convention. On the other hand, ship-owners and their insurers had to be relieved of the additional financial burden that they had to bear since the 1969 Brussels Convention, as compared to that of traditional maritime law, provided they comply with the requirements of international regulations concerning the safety of life at sea, load lines, prevention of pollution of the sea by oil and prevention of collisions at sea. Therefore, a Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage was signed in Brussels on December 18, 1971. The Fund can pay compensation limited to a maximum of 450 million Poincaré francs for damages which remained not indemnified after payment of the Liability Convention's maximum amount of damages⁸¹.

Oil companies and tanker owners also made voluntary agreements for a similar system for liability. The so-called "TOVALOP" and "Cristal" agreements respectively of January 7, 1969 and of January 14, 1971, establish a private fund of compensation, the maximum liability of which is set to 30 million US Dollars⁸². For damages caused by offshore oil drilling, an Offshore Pollution Liability Agreement has been signed as of September 4, 1974 by twelve major oil companies. Its aim is to provide a guarantee for the payment of compensation or reimbursement to any person who sustains pollution damage and any State which incurs costs for taking remedial measures as a result of a discharge of oil from any offshore facility. However, the compensation is limited to a maximum of 16,000,000 US dollars⁸³.

All these conventions and agreements, whether inter-State or private, are characterized by a common target, which is to yield compensation by the most practical and safest means to those who suffered damage from environmental harm.

THE ROLE OF INTERNATIONAL LIABILITY IN THE PROTECTION OF THE ENVIRONMENT

There is a considerable amount of discussion in the literature of international law as to the real nature of responsibility for injury to the environment, whether caused to States, to their nationals or to common areas⁸⁴. As far as inter-State liability is concerned, recent developments show the growing importance attributed to the liability of States for omissions of specific international obligations. Thus, the very ground for liability would be the duty of due diligence rather than ultra-hazardous activities⁸⁵. One may also cite the conclusion of a recent study according to which international law requires proof of material damage as a precondition of the polluting State's responsibility⁸⁶.

However, the place which doctrinal discussions and even programmes of international organs accord to liability for environmental harm as a means to protect the environment, seems out of proportion. There is a fundamental uncertainty concerning the effective implementation of the rules of law through international liability as a means to compel States to respect the environment and to make it respected. It is never certain that a Government is willing to present a claim for its national or even that it would claim for itself if environmental damage was caused. Moreover, even if a procedure has been initiated, the establishment of responsibility can be difficult because of the phenomena of concentration and cumulative effect which often is characteristic of pollution. The identification of the liable party may also raise difficulties and in particular it may be hazardous to plead the responsibility of a given polluter for given consequences, for instance for long-distance pollutions, or when more than one polluting activity is concerned. Even if all these obstacles are surmounted, the determination of damages may give rise to problems. Normally, the extent of the damage suffered helps in the determination of the sum to be paid to the victim. In cases of transfrontier pollution, however, when a State complains of the damage caused by the pollution of a river, by fog or smoke diffused over its territory or radioactive fall-out reaching the ground, it can be extremely difficult to establish exactly the total damage already suffered, not to mention the damage yet to be caused. It may be recalled, too, that damages accorded by national courts are generally, as experience shows, too low.

Another point must be stressed. Prevention is one of the fundamental requirements for the protection of the environment, and it may be considered that it is also one of the main principles of international evironmental law. The actual consequence of this principle is that, at a legal level, it is no longer sufficient to try to prevent injury to the environment through the sole responsibility of the polluter. The fundamental uncertainty of the efficiency of international liability in general and in this field in particular prevents the latter from being a deterrent which would ensure prevention. One should not forget the evolution which has taken place in the legislation of almost all industrialized States regarding the protection of the environment. In the beginning, in most

areas the only protection against nuisance was civil responsibility for the polluter. This method of defense has proven so inadequate that all these States have adopted new legislative regulations, often in great detail and with precise rules. The principle characteristic of these rules is their preventive nature; they lay down prohibitions, restrictions or establish a system of prior authorization. In this way there is no longer the need to wait for damage to be suffered in order to be able to intervene against environmental harm.

One may remember that, as has been shown before, the evolution of the protection of environment in common areas has taken the same direction. Liability results from the non-application of principles of a preventive character as put forth by international regulations. Moreover, even where there is no such regulation, as in the Trail Smelter Case, it was considered necessary to establish one for the future. One cannot emphasize enough the importance of the conclusions of the arbitrators in this the only case concerning international liability for transfrontier environmental injury, namely that regulations had to be established and the two concerned States had to cooperate in order to prevent future injuries to the environment.

CHAPTER V

THE PRINCIPLE OF PREVENTION: INTERNATIONAL REGULATION

PRINCIPLES

All ecologists agree that the principle of prevention is a fundamental rule in the protection of the environment. Consequently, this principle underlies most international texts concerning it. For example, Recommendation 70 of the Stockholm Action Plan of 1972 stresses the importance for Governments to be mindful of activities in which there is an appreciable risk of effects to climate. It recommends that a careful evaluation be made of the likelihood and magnitude of such climatic effects and that governments disseminate their findings to the maximum extent feasible before embarking on such activities.

Recommendation 71 of the Stockholm Action Plan is still more explicit. It recommends that:

"Governments use the best practical means available to minimize the release to the environment of toxic or dangerous substances, especially if they are persistent substances such as heavy metals and organochlorine compounds, until it has been demonstrated that their release will not give rise to unacceptable risks or unless their use is essential to human health or food production, in which case appropriate control measures should be applied."

Another soft law instrument which could be more immediately efficient than the Stockholm recommendations, is the Declaration of the Council of the European Communities, and in particular, the Programme of Action of the Communities on the environment, as it includes the principles of prevention. The very first of the "Principles of an Environmental Policy" (which are intended to be the basis for any Community action in this field) proclaims that:

"The best environment policy consists in preventing the creation of pollution or nuisances at their source, rather than subsequently trying to counteract their effects. To this end, technical progress must be conceived and devised so as to take into account the concern for protection of the environment and for the improvement of the quality of life at the lowest cost to the community."

The second of the Principles of a Community Environment Policy adds an important direction for the implementation of the first. According to it, effects on the environment should be taken into account at the earliest possible stage in all the technical planning and decision-making processes⁸⁷.

The Final Act of the Conference on Security and Cooperation in Europe, signed by 35 Governments in Helsinki, on August 1, 1975, affirms also that "damage to the environment is best avoided by preventive measures" 88.

One may also add that according to the Declaration of Principle on Air Pollution Control, adopted by the Committee of Ministers of the Council of Europe on March 8, 1968 "legislation on air pollution control must be based on the principle of prevention" ⁸⁹.

There is clearly a convergence between the need for prevention in the field of the protection of environment and the function of law in general. The main task of the latter is to maintain a given system of social values. The sanctions inflicted upon those who violate these values have, or at least should have; a preventive character resulting from their deterrent effect. However, all the different techniques of law are not equally efficient in the prevention of injury to the environment. It has been said above that international liability for previously caused environmental harm has in reality had little preventive effect. It may also be recalled that international liability seems to be best assessed in cases where there are precise international law rules to tell the Governments what they are not allowed to do. Hence, the preventive function of international law implies the elaboration of specific international regulation. Thus, the main objective of the present chapter will be to examine how the principle of prevention is applied by international regulation and what main features, problems and requirements are involved.

The preventive aspect of international environmental law has been clearly perceived by the Governing Council of UNEP. Its decision no. 35 (III) related to environmental law, adopted on May 2, 1975, stresses the importance of prevention as it asks the Executive Director to help developing countries in drafting their municipal legislation in the field of the protection of the environment 90.

It has been previously observed that international law is a developing branch of law. In consequence, it has developed differently in different fields. Thus, the international rules on various subjects are frequently in different stages of evolution. This is certainly the case for environmental law; rules are more numerous and are better assessed in certain fields, like ocean pollution, than in others, like air pollution control or the use of pesticides.

Prior to an overview of the main characteristics of international regulation concerning the protection of environment and of the legislative techniques for prevention used at the international level, it is beneficial to first summarize the present state of international norms in the most important fields of environmental protection. These include marine pollution, rivers and lakes, the protection of the atmosphere and wildlife.

A GENERAL SURVEY OF EXISTING INTERNATIONAL REGULATION

1. MARINE POLLUTION

International regulation is particularly important for marine pollution because of the particular legal status of the sea, and because of natural phenomena which play a considerable part in this field. On the one hand, the sea is divided into parts having different legal regimes; high seas, territorial sea, contiguous zone, and bays and gulfs. But, on the other hand, natural phenomena like currents

ignore legal distinctions as they can carry pollution from one part of the sea into another. In addition, polluting materials may come into the sea from land-based sources directly or carried by rivers. Hence, international regulation concerning the protection of the sea against pollution in necessarily manifold, according to different requirements. It is impossible to examine here all the aspects of marine pollution: only the regulations concerning three of them will be summarized, i.e. pollution by normal use of the oceans (shipping, fishing, flights), ocean dumping, and pollution coming from land-based sources.

At the outset, the Caribbean Countries' Declaration concerning the Problems of the Sea, of June 9, 1972 should be quoted:

"(It) is the duty of every State to refrain from performing acts which may pollute the sea and its seabed, either inside or outside its respective jurisdiction" ⁹¹.

Some of the Stockholm rules on ocean pollution should also be recalled. Principle 6 of the Declaration of the Human Environment, which is applicable to the sea as well as to the non-marine environment, proclaims that the discharge of toxic substances or of other substances, and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems. Principle 7 is a specific rule on the obligation to prevent pollution of the sea:

"States shall take all possible steps to prevent pollution of the seas by substances that 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".

The Stockholm Action Plan contains a special chapter (recommendations 86 to 94) related to marine pollution. These recommendations, however, are directed to a great extent towards further research and monitoring in the marine environment and to international cooperation, including the support to be given to intergovernmental bodies in this field. Only recommendation 86 has a more direct relationship with preventive international regulation. According to this resolution, the Governments should, with the assistance and guidance of appropriate United Nations bodies, accept and implement available instruments on the control of the maritime sources of marine pollution, ensure that the provisions of such instruments are complied with by ships flying their flags and operating in areas under their jurisdiction and, finally, control ocean dumping by their nationals anywhere or by any person in areas under their jurisdiction. Recommendation 86 also urges the Governments to continue to work towards the drafting and the bringing into force of international instruments for the control of marine pollution. Governments are also urged to strengthen national controls over land-based sources of marine pollution, in particular in enclosed and semi-enclosed seas. It further recommends that all significant sources of pollution within the marine environment, (in particular in enclosed and semi enclosed seas), be brought under appropriate controls by the middle of the 1970's.

a. Marine Pollution by Normal Uses of the Sea

One of the first international instruments designed to control marine pollution was the *International Convention for the Prevention of the Pollution of the Sea by Oil* signed in London on May 12, 1954. In prohibiting the discharge of oil within certain zones, it constituted an attempt to reduce deliberate marine pollution by discharge of oil from ships resulting mainly from the cleaning of their oil tanks in the open sea.

The 1954 Convention was amended on April 11, 1962 in order to extend the zones where discharge of oil is prohibited. Also, new amendments were adopted by the Assembly of the Inter-Governmental Maritime Consultative Organisation in London, on October 21, 1969. In these latest amendments, the system of prohibited zones has been substituted for what is, in principle, a total prohibition of all discharges of "oil" or "oily mixture". According to Article III of the London Convention, as amended, the discharge from a ship or tanker of oil or oily mixture is prohibited, except when the ship is proceeding *en route* and the instantaneous rate of discharge of oil content does not exceed 60 litres per mile. Two additional conditions must be satisfied with, which are, however, different for ordinary ships and for tankers. For ordinary ships, the oil content of the discharge must be less than 100 parts per 1,000,000 parts of the mixture and the discharge must be made as far as practicable from land. For tankers, the total quantity of oil discharged on a ballast voyage must remain under 1/15,000 of the total cargo carrying capacity and the tanker must be more than 50 miles from the nearest land.

Different supervisory measures are provided for by the London Convention. However, contraventions of its rules are only punishable under the law of the flag State (Article II). Other Governments may only furnish evidence that a provision of the Convention has been contravened (Article X).

In the meantime, the Codification Conference on the Law of the Sea, held in Geneva in 1958, has adopted a very general principle concerning the pollution of the sea by oil. According to Article 24 of the *High Seas Convention* of April 29, 1958, every State shall draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines or resulting from the exploitation and exploration of the seabed and its subsoil. This latter provision is important as far as it also concerns pollution from offshore drilling.

Also the *Convention on the Continental Shelf*, signed on the same day, provides that "the coastal State is obliged to undertake, in the safety zones, all appropriate measures for the protection of the living resources of the sea from harmful agents" (Article 5, par. 7).

The London Convention, even as amended in 1962 and 1969, provides no rule for liability for accidental marine pollution by oil or by other substances resulting from the collision or stranding of ships. The Torrey Canyon case, in which approximately 100,000 tons of crude oil were spilled into the sea as a result of the stranding of a tanker flying the Liberian flag, led to the adoption of new amendments on October 15, 1971. These amendments established cargo tank size limits to reduce accidental spills⁹³. At the same time several new treaties have been signed which concern wholly or in part the consequences of

accidental marine pollution by oil. Two of these conventions have been previously mentioned when speaking of international liability: the 1969 Brussels Convention on Civil Liability for Oil Pollution Damage and the 1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 94. The last Convention, signed in Brussels on November 29, 1969, has a preventive character as it is related to Intervention on the high seas in cases of oil pollution casualties. This Convention is important as it presents a retreat from the principle of absolute freedom of high seas and the principle of exclusivity of the flag State's jurisdiction. According to Article I, 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 interest from pollution or threat of pollution of the sea by oil, following a maritime casualty, which may reasonably be expected to result in major harmful consequences. Thus, ships flying a foreign flag are no longer protected by their flag in this respect, with the exception of warships and other ships owned and operated by a State, as is specified in Article I.

Measures that a threatened State can take may range from the towing away of an abandoned ship whose oil spill can cause serious damage, to the use of bombs to destroy the oil by fire⁹⁵. However, the authors of the Convention sought to limit the consequences of such intervention by adopting certain conditions which must be met prior to state action. Except in cases of extreme urgency, a coastal State must first engage in consultations with other States affected by the maritime casualty, particularly with the flag State. Next, it must notify all concerned powers of the proposed measures and it may proceed to consultation with independent experts before any measure is taken. Finally, such measures must be proportionate to the actual or threatened damage⁹⁶.

The International Legal Conference on Marine Pollution Damage, which adopted the 1969 convention on intervention, also issued a resolution on international cooperation concerning pollutants other than oil. It recommended that Contracting States which become involved in a case of pollution danger by agents other than oil cooperate by applying wholly or partially the provisions of the convention⁹⁷. Four years later, on November 2, 1973, a Protocol was signed relating to intervention on the high seas in cases of marine pollution by substances other than oil. It extends the provisions of the 1969 Brussels Convention to: "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". A non-limitative list of such substances was to be set up by the Marine Environment Protection Committee established for this purpose by IMCO⁹⁸.

Two regional arrangements were also concluded concerning the pollution of the sea by oil. An agreement of June 9, 1969 for *Cooperation in Dealing with Pollution of the North Sea by Oil* which was signed in Bonn by Belgium Denmark, the Federal Republic of Germany, France, the Netherlands, Norway, Sweden and the United Kingdom, provides for information in oil pollution casualties, for the assessment of the risk of pollution and for mutual assistance to deal with oil which is threatening the coast or related interests of the Contracting Parties. An *Agreement* signed in Copenhagen on September 16, 1971 by Denmark, Finland, Norway and Sweden basically reproduces the main provisions of the Bonn Agreement in regard to taking measures against pollution

of the sea by oil and then develops them further with specific obligations. These obligations include the providing of equipment for dealing with any significant oil slicks at sea and the maintenance of stocks of anti-oil material. In addition, it provides that the Contracting States inform each other of any case where a vessel registered in another Contracting State has been observed committing an offense within the territorial or adjacent waters of the Contracting States against the regulations concerning pollution by oil. The Contracting States will then render assistance to each other in the investigation of such offenses.

Finally a general regulation has been adopted to cover pollution from all other harmful substances including oil carried by vessels. This is the *International Convention for the Prevention of Pollution from Ships,* drafted in the framework of IMCO and adopted by an inter-governmental conference in London on November 2, 1973. This Convention will upon its entry into force, supersede the 1954 London Convention for the Prevention of Pollution of the Sea by Oil as amended. It is a very complex instrument, composed of the principal convention, 5 annexes (three of which are optional), and two protocols.

According to the general rules included in the principal instrument, the Parties to the Convention undertake to give effect to its provisions in order to prevent the pollution of the marine environment by the discharge of harmful substances or effluents containing such substances in contravention of the Convention. The Convention applies to ships entitled to fly the flag of a Party to the Convention or operating under the authority of a Party as well as floating platforms engaged in exploration or exploitation of the sea-bed, but not to warships or any other ship owned or operated by a State on governmental non-commercial service. The general rule is that any violation of the Convention shall be prohibited and sanctions shall be established under the law of the administration of the ship wherever the violation occurs. This provision concerns above all polluting acts committed on the high sea. However, the violation of the requirements of the Convention within the jurisdiction of any Party can be prohibited and sanctions must be established therefore under the law of that Party (Article 4).

A ship to which the Convention applies may, in any port or offshore terminal of a Party, be subject to inspection by officers for the purpose of verifying whether it had discharged any harmful substances in violation of the provisions of the annexed regulations. If the inspection indicates a violation of these rules, a report shall be forwarded to the administration of the ship for any appropriate action (Article 6). However, any of the Contracting States may deliver a verification certificate to its ships which limits inspection in the ports or off-shore terminals of other Contracting Parties to the verification of the validity of the certificate, unless there are clear grounds for believing that it does not substantially correspond to reality (Article 5). If any casualty occurring to any ship subject to the provisions of this Convention has produced a major deleterious effect upon the marine environment, the administration of that ship will undertake to conduct an investigation (Article 12).

It is rather curious that the fundamental rules of the Convention are not found in the principal Convention, but in the annexes. However, the technical character of most of the relevant provisions can explain the use of this technique in the drafting of the instruments.

Annex I contains regulations for the prevention of pollution by oil and prohibits, in principle, any discharge into the sea of oil or oily mixtures from ships except when a certain number of conditions are satisfied. These conditions are different for tankers and for other ships; among the latter, ships under 400 tons gross tonnage are not involved (Regulation 9). It is specified that whenever visible traces of oil are observed on or below the surface of the water in the immediate vicinity of a ship or its wake, Governments of Parties to the Convention should promptly investigate the facts bearing on the issue of whether there has been a violation of the Convention. Regulation 10 prohibits any discharge of oil or oily mixture in the Mediterranean Sea, the Baltic Sea, the Red Sea and Gulf areas, which are considered as "special areas". These prohibitions do not apply to the discharge of oil or oily mixture when it is necessary to do so to secure the safety of a ship or to save life at sea, or when the discharge results from damage to a ship or its equipment, provided that all reasonable precautions have been taken in order to prevent or minimize the discharge (Regulation 11). It may be added that among other technical prescriptions the Annex provides for the limitation of size of cargo tanks (Regulation 24).

Annex II provides for the control of pollution by noxious liquid substances in bulk. These substances are divided into four categories. Substances in category A if discharged into the sea would present a major hazard to either marine resources or human health or cause serious harm to amenities or other legitimate uses of the sea and must therefore never be discharged. The discharge of substances of categories B, C and D is prohibited unless specific conditions are met (Regulations 3 and 5). There are particular rules concerning category A, B and C substances within special areas (Regulation 5). A list of noxious liquid substances carried in bulk completes Annex II.

The three other annexes are optional. The first of them, Annex III, prohibits the carrying by ships of harmful substances in packaged form, or in freight containers, portable tanks or road and rail tank wagons, except in accordance with the provisions of the Annex concerning packaging, marking and labelling, documentation, storage, etc. Annex IV prohibits the discharge from ships of sewage into the sea except if certain conditions are satisfied. Annex V tends to prevent the pollution of the sea by garbage from ships: it prohibits the disposal into the sea of all plastics and imposes rules for other kinds of garbage.

Two Protocols are also annexed to the Convention. The first concerns reports on incidents involving harmful substances and has a fairly administrative character. The second is related to arbitration in conformity with Article 10 of the Convention, according to which, if the settlement of a dispute concerning the interpretation or application of the Convention has not been possible by negotiation and if the Parties involved do not otherwise agree, the dispute will be submitted upon request of any of them to arbitration.

The 1973 London Convention is certainly an important step towards a general regulation of marine pollution as it covers all forms of pollution by ships. Yet, it concerns only one aspect of pollution, leaving aside ocean dumping and land-based pollution.

All marine pollution issues have been treated in a regional convention, on the *Protection of the Marine Environment of the Baltic Sea Area*, concluded at Helsinki on March 22, 1974 and signed by Denmark, the Federal Republic of Germany, Finland, the German Democratic Republic, Poland, Sweden and the USSR. The Baltic Sea Area includes the Baltic Sea with its entry, the Gulf of Bothnia and the Gulf of Finland. It is a particularly endangered zone, and protection is included for both the water-body and the seabed. Like other conventions concerning similar issues, the Helsinki Convention does not apply to warships or other ships and aircraft owned or operated by a State and used for non-commercial government service (Article 4). The obligations imposed on Contracting Parties by the Convention consist in taking; "all appropriate legislative, administrative or other relevant measures in order to prevent and abate pollution and to protect and enhance the marine environment of the Baltic Sea Area" (Article 3). Thus, the Convention does not impose directly binding rules.

As to the prevention of pollution from ships, the Contracting Parties shall take measures as set out in Annex IV of the Convention, according to which any discharge into the sea of oil or oily mixtures from any oil tanker and any ship of 400 tons gross tonnage shall be prohibited in the Baltic Sea Area. Such ships, while in this area, shall retain on board all oil drainage and sludge, dirty ballast and tank washing waters and discharge them only to reception facilites (Regulation 4). Fixed and floating drilling rigs, when engaged in the exploration and exploitation of sea-bed mineral resources, and other platforms, must comply with the requirements. Ships of less than 400 tons gross tonnage other than oil tankers may discharge oil or oily mixtures into the sea but only in strictly defined conditions. This regulation does not apply, however, to the discharge of oil into the sea if necessary to secure the safety of a ship or to save life or when it results from damage to a ship or its equipment.

Following the same method, the Contracting Parties are engaged to apply common rules concerning the discharge of noxious liquid substances in bulk form while operating in the Baltic Sea Area (Regulation 5 of the same Annex to the Convention), of harmful substances in packaged forms (Regulation 6), sewage from ships (Regulation 7) and garbage from ships (Regulation 8).

A special provision of the Convention concerns pleasure craft, which is quite exceptional in the field of the protection of the sea against pollution. In addition to implementing those provisions of the Convention which can appropriately be applied to pleasure craft, the Contracting Parties must take special measures in order to abate harmful effects on the marine environment from pleasure craft activities (Article 8).

Some general provisions of the Convention or of its annexes concern pollution by ships as well as other forms of marine pollution. One of these requires that the Contracting Parties undertake to counteract the introduction of hazardous substances into the Baltic Sea Area, (Article 5) as specified in Annex I of the Convention. Annex VI provides rules for cooperation in combating marine pollution, especially as to surveillance activities, and also the salvage and recovery of harmful substances, the receiving, channeling and dispatching reports on spillages of oil or other harmful substances as well as any incident causing or likely to cause any kind of significant pollution. Agreements, bilateral or

multilateral, must be concluded between Contracting Parties prior to action for combating pollution or for salvage activities whenever there is significant pollution or a likelihood that such pollution will occur within the Baltic Sea Area. Still, even beyond such agreements, a Contracting Party requiring assistance for combating spillages of oil or other harmful substances is entitled to call upon other Contracting Parties for assistance. The other parties must use their best endeavours to provide such assistance (Regulations 3-8 of Annex VI).

Of course, this Convention must fit into the framework of universal treaties concluded in the same field. Article 21 specifies that its provisions shall be without prejudice to the rights and obligations of the Contracting Parties under treaties furthering and developing the general principles of the Law of the Sea and in particular to provisions concerning the prevention of pollution of the marine environment.

The Convention for the Protection of the Marine Environment against Pollution in the Mediterranean, prepared under the auspices of FAO and signed in Barcelona on February 16, 1976, is similarly related to the three main aspects of marine pollution, discharge of oil, ocean dumping and land-based pollution. Its principles are fundamentally the same as those of the Convention of the Baltic Sea Area⁹⁹.

b. Dumping of Wastes at Sea

Of the three forms of prevention of marine pollution, the prevention of disposal of wastes at sea is the one where international regulation is most advanced. The Convention on the Dumping of Wastes at Sea, adopted by an intergovernmental conference in London on November 13, 1972 constitutes a world-wide regulation of the problem as well as a frame treaty. In addition, there exists one regional convention, the 1972 Oslo Convention, concerning the same matter and the Convention on the Protection of the Marine Environment of the Baltic Sea Area also includes provisions for the prevention of dumping. Of course, it would be desirable that other regional agreements be concluded for particularly endangered maritime areas, like the Mediterranean.

The 1972 London Convention applies to any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other manmade structures at sea. It does not include incidental dumping or the disposal of wastes derived from the normal operation of vessels or aircraft. Dumping directly arising from, or related to, the exploration or exploitation of seabed mineral resources is also excluded from the scope of the Convention (Article III).

The Convention has a strongly stressed preventive character. The preamble as well as Articles I and II insist on the importance of preventing the pollution of the sea by the dumping of waste and other matter that is liable to create hazards or to interfere with other legitimate uses of the sea. The Contracting Parties pledge themselves to take all practicable steps to prevent pollution and in particular to take effective measures individually as well as to harmonize their policies in this regard. As in other conventions concerning the prevention of marine pollution, here too the main obligation of the Parties is to implement the principles thus proclaimed and to prohibit the dumping by themselves.

The main tenet of the Convention is a prohibition of the dumping of any wastes. Still, this prohibition is absolute only for certain substances enumerated in Annex I to the Convention, ("black list": organohalogeneted compounds, mercury, cadmium, non-destructible plastics, oil, etc.). Specific other substances can be dumped if a prior special permit is delivered (Annex II, "grey list": arsenic, lead, copper, zinc, fluorides, pesticides, etc.), and the dumping of all other wastes or matters requires a prior general permit. The factors which must be considered when issuing any permit for the dumping of matters at sea are also specified (Annex III). They include prior studies of the characteristics of the dumping site, possible effects on amenities, on marine life, on other uses of the sea and the practical availability of alternative land-based methods of treatment. Emergency cases are excepted from the application of the prohibition or of the licensing system (Article V). Each Contracting Party must designate an appropriate authority to issue the permits required by the Convention. The permit must be issued by the authority of the State where the matter intended for dumping is loaded. If the loading occurs in the territory of a State not party to the convention, the flag State's authority must issue the permit (Article VI).

The prevention and punishment of contraventions to the provisions of the Convention are incumbent on the Contracting States, as the jurisdiction of the flag State remains exclusive on its vessels. However, the Parties agree to cooperate in the development of procedures for the effective application of the Convention on the high seas, including procedures for the reporting of vessels and aircraft observed dumping in contravention of the Convention (Article VII). It is not specified whether these procedures shall be national or international.

Regional cooperation is also stressed in the Convention. Acording to Article VIII, the Contracting Parties with common interests to protect the marine environment in a given geographical area shall endeavour to enter into regional agreements consistent with the London Convention for the prevention of pollution, especially by dumping.

As a matter of fact, such a regional arrangement existed several months prior to the London Conference. On February 15, 1972, twelve European States signed a Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft in Oslo. Several provisions of the Oslo Convention may have indeed inspired those who drafted the London Convention of the same year. Nevertheless, the Oslo Convention has a geographically limited scope, as it concerns only a part of the Atlantic and Arctic Oceans and their dependent seas, but excludes the Baltic Sea and Belts as well as the Mediterranean Sea and its dependent seas.

The fundamental obligation of the Contracting Parties, to take all possible steps to prevent the pollution of the sea, is formulated very much in the same manner as in the London Convention. The legislative techniques applied are also similar; the dumping of substances listed in a "black list" (Annex I to the Convention) is prohibited, while those on a "grey list" can be dumped when there is a specific permit issued in each case by the appropriate national authority. The dumping of other substances or materials requires the approval of the appropriate authority, granted in accordance with criteria specified by Annex III. Here too, dumping in emergency cases is excepted.

The main difference between the Oslo and London Convention is institutional. While the London Convention only outlines the institutions for surveying the application of its provisions, the Oslo Convention establishes an international Commission, the first duty of which it is to exercise overall supervision over the implementation of the Convention. The Commission also receives and considers the records of permits and approvals issued by national authorities as well as records of the nature and the quantities of the substances and materials dumped under permits or approvals issued by the Contracting Parties and the dates, places and methods of dumping (Articles 11 and 17b). Thus, the Oslo Convention has provided for concrete control measures. Its regional character certainly made the adoption of such measures easier then would have been possible in a general international setting.

Another regional agreement, the *Convention on the Protection of the Marine Environment of the Baltic Sea Area*, concluded at Helsinki on March 22, 1974, also aims at the control of dumping in the sea. The general requirement of this treaty has been summarized above 100. Those concerning the dumping of wastes at sea are twofold. First, Article 5 formulates the obligation for the Contracting Parties to counteract the introduction into the Baltic Sea, "whether airborne, waterborne or otherwise" of hazardous substances as specified in Annex I of the Convention. Secondly, according to Article 9, the Contracting Parties shall prohibit dumping in the Baltic Sea Area. The only substance which may be dumped is dredged spoils, but even then a prior special permit issued by the appropriate national authority in accordance with the provisions of Annex V of the Convention is required. Here also, dumping in emergency cases is excepted, but it must be reported to the Baltic Marine Environment Protection Commission, established by the Convention.

Apart from the last obligation, supervisory measures provided for in the Convention are to be undertaken at national levels. Still, according to Annex IV, Regulation 2 of the Convention, the Contracting Parties shall when appropriate assist each other in investigating violations of existing legislation on antipollution measures.

Another regional convention, which has been signed in Barcelona on February 16, 1976, is the *Convention for the Protection of the Marine Environment Against Pollution in the Mediterranean.* It also provides for the prevention of pollution by disposing waste at sea from ships and aircraft (Article 4)¹⁰¹.

Another provision, of a world-wide scope but concerning only one polluting substance, may also be recalled. According to Article 25 paragraph 1 of the 1958 Geneva Convention on the High Seas, every State shall take measures to prevent pollution of the seas by the dumping of radioactive waste, taking into account any standards and regulations which may be formulated by the competent international organisations. As a matter of fact, the 1972 London Convention on the Dumping of Wastes at Sea includes in its Annex I (black list) high-level radioactive wastes or other high-level radioactive matter, defined on public health, biological or other grounds by the International Atomic Energy Agency as unsuitable for dumping at sea.

In conclusion, the international regulation concerning marine pollution by dumping is much simpler and more homogeneous than that preventing pollution by ships and aircraft. This is undoubtedly the consequence of a much quicker evolution, which began later and coincided with the zenith of the development of international environmental law.

c. Land-Based Pollution

Land-based pollution, i.e. pollution of the maritime area through watercourses, and from the coast through pipelines or from man-made strctures, has been only regulated thus far in regional frameworks which have concerned a part of the Atlantic and Arctic Oceans and the Baltic Sea Area. The Convention on the Mediterranean Sea includes also a provision concerning land-based pollution¹⁰².

An independent convention entirely concerning pollution from land-based sources has been drafted by the Conference on the *Prevention of Marine Pollution from Land-based Sources*, held in Paris in February 1974 with 18 European Governments or intergovernmental organizations participating. It was opened for signature on June 4, 1974. There is an evident relationship between this Convention and the Oslo Convention on dumping from ships and aircraft. Eleven out of the twelve signatories of the Oslo Convention participated in the drafting of the Paris Convention. The geographic area covered by both is the same and some of the principles formulated are the same. Besides, a Resolution adopted by the Paris Conference recommends that the commissions set up pursuant to the two Conventions should consist of the same representatives, their meetings should be combined and they should set up a common Secretariat.

According to the Paris Convention, the Contracting Parties shall individually and jointly adopt measures to combat marine pollution from land-based sources (Article 1). They undertake to eliminate, if necessary by stages, pollution of the maritime area by substances listed in an Annex to the Convention and to strictly limit the pollution by several other substances also listed in the same Annex (Article 4). Other substances may also be added to these lists (Article 4, par. 4). In addition, the Contracting Parties shall endeavour to reduce existing pollution and to forestall any new pollution from land-based sources (Article 6).

These objectives are sought to be realized through the implementation of programmes and measures including, if appropriate, specific regulations or standards governing the quality of the environment as well as discharges into the maritime area or into watercourses which affect it, and regulations concerning the composition and use of substances and products (Article 4). It may be stressed that the Paris Convention constitutes an innovation in the prevention of marine pollution as far as it provides for the setting of standards. As a matter of fact, this requirement is more frequent in regulations concerning the pollution of rivers and lakes. Yet, the natural link between watercourses and maritime areas may explain the introduction of the new technique of prevention in this field.

Another interesting feature of the Paris Convention should also be emphasized. According to Article 5, the Contracting Parties shall take full account of the recommendations of the appropriate international Organizations and Agencies. One may wonder whether the effect of this provision is to transform to a certain extent such recommendations into legally binding obligations for the Contracting Parties of the Paris Convention.

The Convention establishes a Commission composed of representatives of each of the Contracting Parties (Article 15), which exercises overall supervision over the implementation of the Convention (Article 16, a). In particular, the Contracting Parties must inform the Commission of the legislative and administrative measures they have taken to prevent pollution and to punish conduct in contravention of the provisions of the Convention (Article 12). Finally, at the request of any Contracting Party concerned, the Commission may make recommendations in concrete cases (Article 9).

Article 6 and Annexes II and III of the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area are also related to land-based pollution. According to Article 6, the Contracting Parties shall take all appropriate measures to control and strictly limit pollution by noxious substances and materials listed in Annex II, which must not be introduced into the marine environment of the Baltic Sea Area in significant quantities without a prior special permit delivered by the national authorities. The latter must inform the Commission established by the Convention. In the future, parties must cooperate inter alia in the adoption of guidelines, standards or regulations concerning discharges and environmental quality, as well as in common criteria for issuing permits for discharges. Moreover, Annex III formulates the goals, criteria and measures concerning the prevention of land-based pollution, such as the appropriate treatment of municipal sewage, the minimization of polluting load of industrial wastes as well as that of the discharge of cooling water from power plants. The Commission is in charge of defining pollution control criteria, objectives for reduction of pollution and the planning of measures in order to abate pollution in the Baltic Sea Area.

d. Trends in Future Evolution

International law rules related to marine pollution may in the future follow a two-pronged evolution. On the one hand, national legislation may be extended either to special zones or to zones which have a general economic interest for a coastal State. This can imply the application of the anti-pollution legislation of the coastal States to all ships in such zones. An example of this "creeping jurisdiction" is the Canadian Artic Waters Pollution Prevention Act adopted in 1970, which provides for a zone extending to 100 miles from the nearest land 103.

On the other hand, the Third United Nations Conference on the Law of the Sea will possibly adopt a kind of codification of the rules related to marine pollution. Informal agreement has been reached at the Caracas and Geneva sessions on about eleven articles concerning subjects such as the basic obligation of States to protect and preserve the marine environment, the obligation not to transfer pollution from one area to another, the monitoring of pollution, the assessment of the potential effects of activities which may cause substantial pollution of the marine environment, the obligation of States to establish national laws and regulations to prevent pollution of the marine environment from land-based sources as well as from dumping of wastes at sea, etc. As a matter of fact, if the coordination between world-wide and regional action in order to prevent pollution of the oceans does not seem to raise really difficult problems, the question remains whether the instruments aiming to combat different forms of pollution do not indeed need such a coordination, a result which could be realized by codification.

2. POLLUTION OF RIVERS AND LAKES

There is a considerable difference in the status of international regulation for the prevention of marine pollution and that related to the pollution of rivers and lakes. While the first includes necessarily vast areas and can be easily fitted into a world-wide framework, problems arising from river and lake pollution have generally a limited geographical concern, affecting usually only riparian States of a lake or watercourse or, at the most, States which share the area of a river basin. Thus, concrete solutions must be looked for at regional, sub-regional and quite often even at bilateral levels. However, there is a need for principles which can be used as guidelines in the elaboration of regional or local rules since widely varying approaches to different situations could result in significant economic consequences.

Until now, no mandatory regulation has been drafted on a world-wide scale concerning the prevention of the pollution of fresh water. Nevertheless, several soft-law principles are applicable. One is Principle 21 of the 1972 Stockholm Declaration, according to which States have the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. Another soft-law principle is that of the cooperation in regard to natural resources shared by two or more States, which was formulated in a UN General Assembly Resolution adopted on December 13, 1973. According to this resolution, it is necessary to ensure effective cooperation between countries through the establishment of adequate international standards for the conservation and harmonious exploitation of natural resources common to two or more States¹⁰⁴.

Recommendation 51 of the Stockholm Action Plan is in the same spirit. After having recalled that full consideration must be given to the right of permanent sovereignty of each country concerned to develop its own resources, it declares that the following principles should be considered by the State concerned when appropriate:

- "i) Nations agree that when major water resource activities are contemplated that may have a significant environmental effect on another country, the other country should be notified well in advance of the activity envisaged;
- ii) The basic objective of all water resource use and development activities from the environmental point of view is to ensure the best use of water and to avoid its pollution in each country;
- iii) The net benefits of hydrologic regions common to more than one national jurisdiction are to be shared equitably by the nations affected".

According to Recommendation 51, regional arrangements will permit undertaking cooperation in different fields and, in particular, will provide for the judicial and administrative protection of water rights and claims, the prevention and the settlement of disputes with reference to the management and

conservation of water resources and financial and technical cooperation of a shared resource. Further, it is recommended to the Government concerned that they consider the creation of river-basin commissions or other appropriate machinery for cooperation between interested States. As a matter of fact, the main principle advocated in this field is cooperation between concerned States in the framework of existing international organisations or of international bodies to be created, rather than elaboration of rules on a world-wide scale. It is understood that the cooperation will take place at regional or even sub-regional level.

a. Regulation in a Regional Framework

As a matter of fact, regional regulation has been realized only in Europe. The first step in its creation was the Water Charter proclamation by the Council of Europe on May 6, 1968, stating some elementary principles which should be respected by everyone when using water. Some of them are worth recalling; water is a common heritage of mankind, the management of water resources should be ensured in the framework of river basins and not in that of administrative or political frontiers; water is a shared resource which needs international cooperation.

A very short time after having proclaimed the Water Charter, the Council of Europe began drafting the European Convention for the Protection of International Watercourses against Pollution. Although the Convention has not yet been signed at present, its text has been definitive since March 1974¹⁰⁵.

The Draft Convention takes a multiple approach to the problem of the prevention of water pollution. It contains general rules as well as detailed regulation for certain concrete cases. In addition, it sets water-quality standards and at the same time regulates the discharge into watercourses of certain substances considered dangerous or harmful. Finally, it is a frame treaty, although it nevertheless directly regulates certain aspects of water pollution control. In any case, it is an original and very valuable contribution to international pollution control by its direct application, as well as by the example it sets as an international solution to such problems.

The general principle of the Convention is formulated in Articles 2 and 3: each Contracting Party endeavours to take with regard to all surface waters in its territory, as well as in respect of international watercourses (which include lakes), all measures appropriate for the reduction of existing water pollution and for the prevention of new forms of pollution. Further, a general obligation of mutual cooperation results from Article 8.

As to specific obligations, Article 5 obliges the Contracting Parties to prohibit or restrict discharges into the water of international hydrographic basins, and thus purely national tributaries of international watercourses, of dangerous or harmful substances listed in Appendix II to the Convention. As a matter of fact, this Appendix includes two lists of substances. The first, list A ("black list"), implies that discharge of the named substances be subject to previous administrative authorization by the competent authority of the State responsible for the water in question. The second list B, ("grey list") contains substances which are harmful but less dangerous than those in the first. Their discharge is subject to national regulation with a view toward severe limitation.

Concurrently, the Draft Convention sets water quality standards. Two gradations are proposed. Appendix I provides *minimum standards* which must be applied in international watercourses at two points, where they are crossed by international frontiers and at their outlets. These standards are expressed in terms of the maximum permitted concentration of determined chemical substances. Derogations of these standards are authorized if they are agreed to by all the States concerned for certain watercourses and parameters listed in Appendix IV of the Convention (Article 4), but the Contracting Parties must endeavour to reduce the pollution thus admitted and finally to suppress the derogation (Article 10).

Apart from the minimum standards, which are immediately applicable, the Convention establishes procedures and terms of references for the preparation and adoption of *specific standards* applicable to States riparian to the same international watercourse. These standards must be adapted to the various possible uses of the international watercourse (production of drinking water, conservation of wildlife, fishing, recreational amenities, etc.) (Article 4, 17 and Appendix III).

The Draft Convention also provides for an obligation of the Contracting States riparian to the same watercourse, to warn each other as soon as a sudden increase in pollution is recorded (Article 11). The establishment of an early warning system is envisaged.

Permanent cooperation between States which are separated or passed through by the same international watercourse is one of the principal objectives of the Draft Convention. According to Article 12, they must undertake to enter into negotiations with each other with a view to concluding a cooperation agreement. Such agreements may provide for the establishment of an international commission, prepare its organization, its modes of operating and, if necessary, the rules for financing it. The Convention itself proposes a model for such commissions and for their functions, in particular with regard; to the establishment of an early warning system, as well as promoting inquiries, objectives and programmes for reducing pollution and specific water quality standards.

The Convention's weak point seems to be supervision of its application. It mainly consists of a written statement sent every five years by each Contracting Government to the Secretary General of the Council of Europe on measures taken to implement the Convention's principle provisions (Article 7). Such a five year period seems excessively long. In addition, it does not provide for a procedure in case the report gives rise to criticism on the part of the Council of Europe organs or other Contracting Governments. However, it is important that the Contracting States riparian to an international watercourse to which the minimum standards are not yet applied advise each other of the measures they have taken with a view to reaching this level (Article 9). As has been stated before, the Convention expressly stipulates that State liability, as embodied in the rules of general international law, is not affected by its provisions. At the same time, it is foreseen that disputes concerning the interpretation or the application of the Convention must be submitted to an arbitral tribunal, unless the parties concerned agree on some other procedure for peacefully settling their differences.

Prior to the drafting of the European Convention on the Protection of International Watercourses, another treaty was adopted in the framework of the Council of Europe. The European Agreement on the Restriction of the Use of Certain Detergents in Washing and Cleaning Products was signed on September 16, 1968. Still, this concerns water pollution by only one substance, detergents. It is now binding for six member States (Belgium, Denmark, France, Germany, Netherlands, United Kingdom). According to it, the Contracting States undertake to adopt all measures available to ensure that in their respective territories, washing or cleaning products containing synthetic detergents are not put on the market unless the detergent content is at least 80% biodegradable.

Water pollution control is also an important part of the Programme of Action on the environment of the European Communities. The normative programme is particularly vast in this field, and several proposals for directives have been submitted by the Commission to the Council. Directives already adopted concern the approximation of the legislation of Member States related to detergents 106, to the methods of control of the biological degradation of detergents 107 and to the quality required of surface water intended for the abstraction of drinking water 108. The last Directive is particularly important. It concerns all surface water intended for human consumption and supplied by distribution networks for public use. Member States shall take all necessary measures to ensure that surface water conforms to values which may not be less stringent than parameters given in Annex II. Each Member State shall apply this Directive without distinction to national waters and waters crossing its frontiers and take the necessary measures to ensure continuing improvement of the environment, in particular in drawing up a systematic plan of action including a timetable for the improvement of surface water. Surface water having physical, chemical and microbiological characteristics falling short of mandatory limiting values corresponding to an intensive physical and chemical treatment, extended treatment and disinfection may not be used for the abstraction of drinking water.

b. Sub-Regional Regulation

There are many treaty provisions aimed at the prevention of pollution of international watercourses. An exhaustive enumeration of them will not be given, but distinctions can be made according to the different approaches made to the problem of water pollution. Most treaty provisions only formulate a general obligation for the Contracting States not to pollute and not to allow the watercourse to be polluted. These provisions may concern boundary waters, often in the framework of a general treaty on the regime of the concerned frontier, of a given watercourse, or, quite exceptionally, a river basin. Some treaties go further in the way of regulation and set standards which the Contracting Parties must observe 109.

Another approach is the provision for regular cooperation between the concerned States, which may either include the duty of mutual information and consultation (and sometimes even a prior agreement for activities which may be polluting) or by the establishment of international commissions. The latter may be given the function to draft rules and set standards. However, these usually consist of proposals which the participating Government may, or may not, adopt. In addition, any conclusions that the Commissions may arrive at generally require unanimity 110.

Finally, some treaty provisions concerning the prevention of the pollution of international watercourses include common research on existing pollution 111.

Of course, the different approaches or some of their components may be combined; the proclamation of a general obligation not to pollute can be enhanced by the establishment of an international organ, charged to implement it

The following is a list of some of the treaty provisions concerning the pollution of international watercourses:

i. General obligation not to Pollute

A. Boundary Waters

- Treaty United States-Canada (Great Britain), Washington, January 11, 1909, Art. II and IV:
- Agreement Belgium Great Britain regarding water rights on the boundary between Tanganyka and Ruanda-Urundi, London, November 22, 1934, Art. 3;
- Agreement Poland USSR, Moscow, July 8, 1948, Art. 16 and 17;
- Treaty Rumania USSR, Moscow, November 25, 1949, Art. 17;
- Agreement Norway USSR, Oslo, December 29, 1949, Art. 17;
- Treaty Hungary USSR, Moscow, February 24, 1950, Art. 17;
- Agreement German Democratic Republic Poland, Berlin, February 6, 1952; Art. 17;
- Treaty Austria Hungary, Vienna, April 9, 1956, Art. 2;
- Agreement Czechoslovakia USSR, Moscow, November 30, 1956, Art. 14;
- Agreement Hungary Yugoslavia, Belgrade, May 25, 1957, Art. 5;
- Treaty Afghanistan USSR, Moscow, January 18, 1958, Art. 12 and 13;
- Treaty Federal Republic of Germany Netherlands, The Hague, April 8, 1960, Art. 58, par. 1,2e);
- Agreement Finland USSR, Helsinki, June 23, 1960, Art. 15;
- Treaty Poland USSR, Moscow, February, 15, 1961, Art. 18 and 19;

Agreement Poland - USSR, Warsaw, July 17, 1964, Art. 5 par. 7 and 11;

B. Specific Watercourses

- river Vesdre: Treaty Belgium Federal Republic of Germany, Brussels, September 24, 1956, Art. 7;
- Mosel: Treaty Federal Republic of Germany France -Luxemburg, Luxemburg, October 27, 1956, Art. 55;
- Danube and tributary waters: Convention Bulgaria Rumania
 USSR Yugoslavia concerning fishing in the waters of the Danube, Bucharest, January 29, 1958, Art. 7;
- river Our: Treaty Luxemburg Land Rhineland Palatinate concerning the construction of hydroelectric power installations on the Our, Trier, July 10, 1958, Art. 2;
- Indus: Treaty India Pakistan, Karachi, September 19, 1960, Art. IV;
- Lake of Constance: Convention Land Baden-Württemberg Free State of Bavaria Austria Switzerland, Steckborn, October 27, 1960, Art. 1;
- river Tana: Arrangement Finland Norway regarding new fishing regulations for the fishing area of the Tana River, Oslo, November 15, 1960, Art. 18 and Fishing Regulations, Art. 18;
- river Uruguay: Treaty Argentina Uruguay, Montevideo, April 7, 1961, Art. 7;
- river La Plata: Treaty Argentina Uruguay, Montevideo, November 19, 1973, Art. 47-51.

C. River Basins

 Niger Basin: Agreement concerning the Niger River Commission and the navigation and transport on the River Niger, Cameroon - Chad - Dahomey - Guinea - Ivory Coast -Mali - Niger - Nigeria - Upper Volta, Niamey, November 25, 1964.

ii. Standard-Setting

Agreement Poland - German Democratic Republic concerning navigation in frontier waters and the use and maintenance of frontier waters. Berlin, February 6, 1952, Art. 17;

- Treaty Belgium Netherlands concerning the improvement of the Terneuzen and Ghent Canal, Brussels, June 20, 1960, Art. 27 and Annex III;
- Agreement Canada US on Great Lakes water quality, Ottawa, April 15, 1972, Art. II-IV and Annexes I and II;¹¹²
- Agreement Mexico US on the problem of the salinity of the Colorado River, Mexico City, August 30, 1973;¹¹³
- Treaty Argentina Uruguay concerning the La Plata river, Montevideo, November 19, 1973, Art. 49;

iii. Requirement of Prior Information Concerning Pollution Activities and Duty to Consult with the Concerned State

- Agreement Belgium Germany concerning the common frontier, Aachen, November 7, 1929, Art. 55 and 56;
- Convention Land Baden-Württemberg Free State of Bavaria
 Austria Switzerland, Steckborn, October 27, 1960, Art. 1
 par. 3;
- Agreement German Democratic Republic Federal Republic of Germany, Bonn, September 20. 1973, Art. 1;

iv. Establishment of Commission or use of Existing Commissions

- Treaty US Canada (Great Britain), Washington, January 11, 1909, Art. VII - XII;
- Agreement Denmark Germany, Copenhagen, April 10, 1922, Art. 45;
- Protocol between Belgium, France and Luxemburg to establish a tripartite standing committee on polluted waters, Brussels, April 8, 1950;
- Agreement Austria Yugoslavia, Vienna, December 16, 1954 (Mura-Agreement), Art. 1 and Annex I;
- Agreement Rumania Yugoslavia, Bucharest, April 7, 1955, Annex;
- Agreement Hungary Yugoslavia, Belgrade, August 8, 1955, Annex;
- Treaty Austria Hungary, Vienna, April 9, 1956, Art. 12;
- Agreement Bulgaria Yugoslavia, Sofia, April 4, 1958, Art. 8 and Annex;
- Treaty Netherlands Federal Republic of Germany, The Hague, April 8, 1960, Chapter IV;

- Convention Land Baden-Württemberg Free State of Bavaria
 Austria Switzerland, Steckborn, October 27, 1960, Art.
 3-7;
- Protocol France Federal Republic of Germany Luxemburg concerning the constitution of an international Commission for the protection of the Mosel against Pollution, Paris, December 20, 1961;
- Protocol France Federal Republic of Germany concerning the constitution of an international Commission for the protection of the Sarre against pollution, Paris, December 20, 1961;
- Treaty France Switzerland concerning the protection of Lake Leman against pollution, November 16, 1962, Art. 2-9;
- Agreement France Federal Republic of Germany -Luxemburg - Netherlands - Switzerland concerning the International Commission for the Protection of the Rhine against Pollution, Bern, April 29, 1963;¹¹⁴
- Convention and statutes relating to the development of the Chad Basin, Cameroon - Niger - Nigeria - Chad, May, 22, 1964, Annex, Art. 5;
- Act regarding navigation and economic cooperation between the States of the Niger Basin, Niamey, October 26, 1963, Art. 5 - 7; and Agreement concerning the Niger River Commission and the navigation and transport on the River Niger, Niamey, November 25, 1964 (Cameroon - Chad - Dahomey - Guinea -Ivory Coast - Mali - Niger - Nigeria - Upper Volta);
- Regulation Austria Czechoslovakia, Vienna, December 7, 1967, Annex;
- African Convention on the conservation of nature and natural resources, (in force in 10 African States), Algiers, September 15, 1968, Art. 5;
- Agreement Canada USA on Great Lakes water quality, Ottawa, April 15, 1972, Art. VI-IX;
- Treaty Italy Switzerland, concerning the Protection of Swiss and Italian Waters against Pollution, Rome, April 20, 1972, Art. 2-10;
- Treaty Iran Iraq on International borders and good neighbourly relations, Baghdad, June 13, 1975, Protocol on the demarcation of Iraq Iran Water Borders, Art. 8.

It may be added that the Danish - German Agreement of April 10, 1922 entitles persons who suffer damage as a result of pollution, to appeal to the Frontier Water Commission. According to the Mura Agreement (Austria - Yugoslavia) of December 16, 1954, the Permanent Yugoslav-Austrian Commission for the Mura

can secure a friendly settlement of disputes. These are important precedents for the settlement of claims arising out of damages suffered by transfrontier pollution.

3. AIR POLLUTION

Of the fields of environmental law envisaged here, air pollution control is the least developed in international regulations. However, an investigation is still interesting because of the specific problems which arise. As a matter of fact, phenomena such as concentration of air pollutants, whether a consequence of human activities (the proximity of the source of smoke, abundance of particles emitted in the air, continuous and intense noise, intense heat, particularly numerous and virulent radio-active particles, etc.) or resulting from natural sources (geographic configuration, or meteorological conditions, more or less localised and predictable) make it difficult to draft rules defining the criteria of pollution of clean air standards for large areas.

There is an important distinction to be made between the various types of transnational pollution transmitted by air according to the distance which separates the place where the pollution is created and the place where it has its effects. Certain forms of nuisances (e.g. noise or sonic boom), have effects only at short distances. Our understanding of long-distance pollution is much more limited than our understanding of the effects which short-distance pollution can have. At any rate, the legal techniques applicable to the various forms of pollution can not always be the same.

Like other components of the human environment, the air is best protected from pollution in a regional framework. Regions permit not only short but also medium-distance pollution to be dealt with. In addition, regions in their international sense appear sufficiently large to enable the problem to be dealt with on a rather high level (harmonization of legislation, elimination of effects on economic competition resulting from anti-pollution measures), while at the same time responding to the requirements of homogeneity in economic, social and even political structures.

As to existing international regulation concerning air pollution control, the main distinction which can be made is between general and specific rules concerning particular forms of air pollution or particular problems raised by them.

a. General Rules

The Stockholm Declaration does not mention air pollution expressly. Thus the problem seems to be covered in Principle 6:

"The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems".

Likewise, the Stockholm Action Plan concerns air pollution control only as part of pollution in general (Recommendations 70 to 85). As to the legal regulation of the problem, it may be recalled that according to Recommendation 72, in

establishing standards for pollutants of international significance, Governments should take into account the relevant standards proposed by competent international organizations.

The most important text proposing general rules for air pollution control has been issued at the regional level. On March 8, 1968, the Committee of Ministers of the Council of Europe adopted a "Declaration of Principles" on Air Pollution Control¹¹⁵. The Declaration is intended to be a general guideline for national legislation, which should include the principle of liability for those causing pollution, but should be based on the principle of prevention. Concerning the latter point, it advocates in particular a system of individual authorizations for new installations or the alteration of old installations likely to contribute significantly to air pollution, as well as the adoption of general provisions concerning motor vehicles and mass-produced fuel-burning appliances. other principles of the Declaration, supervision and implementation of the rules should be ensured by the States, the planning of urban and industrial development should take into account the effects of such development on air pollution and there should be legislative provision for the application of special measures in zones requiring special protection. Legislation concerning air pollution control should be so conceived that due account be taken of new processes, technical improvement and scientific progress.

While the Declaration of Principles refers mainly to the drafting of uniform legislation in the Member States of the Council of Europe, it nevertheless proclaims that pollution in frontier areas should be subject to joint study by the countries concerned.

b. Regulations Concerning Specific Forms of Pollution

The prevention of air pollution by ionized particles constituting nuclear fall-out (which certainly covers the largest geographic area) is the subject of the Treaty Banning Nuclear Weapon Tests, known as the Treaty of Moscow, of August 5, 1963. With some noted exceptions, (China, France, India), almost all the States of the world are parties to it. According to Article I, each of the Contracting Parties undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion at any place under its jurisdiction or control in the atmosphere.

Another wide-spread regulation concerns aircraft noise. International Standards and Recommended Practices for Aircraft Noise were first adopted by the Council of the International Civil Aviation Organization on April 2, 1971, pursuant to the provision of Article 37 of the 1944 Chicago Convention on International Civil Aviation and referred to as Annex 16 to the Convention. As amended on December 6, 1972, the standards concern noise certification and establish noise levels which shall not be exceeded.

The noise of motor vehicles was one of the environmental topics the United Nations Economic Commission for Europe and the European Communities were both involved in quite early. The UN Commission drafted a Regulation with Uniform Provisions concerning the Approval of Vehicles with regard the Noise on the basis of an Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle

Equipment and Parts, adopted in Geneva on March 20, 1958¹¹⁶. The European Community issued, on February 6, 1970, a directive on the permissible level of noise for motor vehicles¹¹⁷.

Exhaust gas pollution produced by motor vehicles was another subject for international regulation in a regional framework. On the basis of the Agreement of March 20, 1958, quoted above, another regulation was drawn up under the auspices of the UN/ECE (Regulation no. 15) which set limits on the discharge of carbon monoxide and hydrocarbons and is applicable in about 15 States 16. A few days after this regulation was adopted, the Council of the European Communities, in turn, adopted a directive virtually indentical to the ECE regulation, 118 on action to be taken to control air pollution.

Limiting air pollution by controlling black fumes from diesel engines was the subject of another UN/ECE regulation which came into force on September 15, 1972¹¹⁹. Applying the same method as before, the Council of the European Communities has also issued this regulation as a directive 120.

These regulations, especially the directives of the European Communities, were criticized by the European Parliament, the main objection being that they were designed less to combat air pollution than to ensure the free movement of goods. For its part, the Consultative Assembly of the Council of Europe considered that these standards were not stringent enough, especially since the approval procedure which they contain applied only to new vehicles and the effects of the purifying system were likely to be reduced with increasing mileage. A resolution was accordingly adopted on January 22, 1972, urging a tightening of the regulations in order to reduce air pollution from motor-vehicles exhaust gases 121.

Air pollution resulting from the use of fuels was one of the major concerns of a Working Party on Air Pollution Problems set up by the UN Economic Commission for Europe in 1969. The Working Party adopted a recommendation early in 1971 calling for the application of such measures as the desulphurization of flue gases, the desulphurization of fuels, fuel transformation (gasification), fuel substitutes, and the requirement that fuel-burning installations store a quantity of low-sulphur fuels sufficient to reduce the emission of sulphur dioxide during periods of adverse meteorological conditions to acceptable levels 122.

c. Specific Regulations Concerning General Problems

It is generally recognized that *regional planning* has a significant role to play in controlling excessive concentration of pollutants in the atmosphere. The Declaration of Principles on Air Pollution Control adopted by the Committee of Ministers of the Council of Europe in May 1968, stresses that the planning of urban and industrial development should take into account the effects upon air pollution of such development¹²³. Another Resolution of the same body recommends that any definition of residential, commercial and industrial zones include the range of industries or installations causing pollution that may be established in such zones, according to the harmfulness and quantity of their emissions, and that certain industries be permitted only in special zones¹²⁴. Similar principles have been asserted by other intergovernmental bodies such as the UN/ECE Working Party on Air Pollution Problems¹²⁵, and the European Parliament's Economic Affairs Committee¹²⁶.

The coordination of the activities of surveillance and monitoring networks of different countries is one of the basic requirements of international cooperation in the control of air pollution. A decision of the EEC Council establishes a common procedure for the exchange of information between the surveillance and monitoring networks based on data relating to atmospheric pollution caused by certain sulphur compounds and suspended particulates. Parameters defined in Annex I of the Decision must be applied and each Member State shall designate the person or persons, body or bodies responsible for the collection and transmission to the Commission of measurements concerning certain sulphur compounds and suspended particulates. The Commission shall prepare an annual report on the basis of this data, which will be distributed to Member States 127. One can also note that in at least one case, rules have been drafted for a concrete situation by an organ independent of the States concerned, although at their request. Thus, the Arbitration Commission in the Trail Smelter Case between the United States and Canada laid down full regulations to eliminate for the future disputes which could arise between the two States due to the Smelter 128. A similar task faces an intergovernmental body of experts established by the Netherlands, the German federal Government and German Länder concerning air pollution control in areas near the Dutch-German frontier 129.

4. THE PROTECTION OF WILDLIFE

Fauna and Flora are often protected by means of international texts. However, in some cases, the protection is not developed to safeguard the natural balance but to protect economic interests. There is no doubt that long-term economic interests most often coincide with the protection of the environment; still, efforts tending only to maintain the yield of agriculture, cattle breeding, hunting or fisheries may have a negative influence on the environment. Hence international regulations will not be considered here if they are not principally concerned with the protection of wildlife. Conventions concerning plant protection 130 as well as those enhancing the production of certain species of plants 131 will be omitted.

Even treaties concerning only wild species may have other motivations than the safeguarding of wildlife for environmental reasons. This is the case with conventions on fisheries, which are generally aimed at preventing certain forms of marine life from depletion. Although nearly all of them can have beneficial effects on the survival of endangered aquatic species, they will be quoted here only as far as they are environmentally significant.

Finally, no mention will be made here of international regulations promulgated to combat certain species considered harmful to agriculture such as the migratory locust 132. Without denying the importance of such international action, its objective is not to maintain the ecological balance by protecting wildlife.

Even with these restrictions, it can be estimated that the number of international instruments concerning the protecting of wildlife amounts to about fifty conventions and intergovernmental declarations or resolutions. Some of them are entirely concerned with this issue, while others, like the 1920 Treaty on the status of Spitzberg or the 1959 Antarctic Treaty, include only one or more provisions related to wildlife. There are also differences between the scope of

these efforts. A few treaties concerning the protection of wildlife are intended to be applicable to all States of the world, while others have a regional range or even are bilateral. Although all these treaties have not yet been signed and/or ratified by all States which were expected to do so, they will be considered as being parts of existing positive international law.

a. Principles

The main principles which form the basis of international regulation for the protection of wildlife were formulated at the 1972 Stockholm Conference. Principle 4 of the Stockholm Declaration on the Human Environment recognizes that man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat which are now gravely imperiled by a combination of adverse factors. Nature conservation, including wildlife conservation, must therefore receive important consideration in national planning for economic development. It is worth stressing that Principle 2 of the Declaration considers flora, fauna and especially respresentative samples of natural ecosystems as parts of the natural resources of the earth, just as air, water and land are.

The Action Plan adopted by the Stockholm Conference includes a series of recommendations (no. 29-50) concerning wildlife. Most of them are aimed at cooperation in the fields of research concerning wildlife and of the conservation of the world's genetic resources. However, some stress the need for international regulation. In particular, it is recommended that Governments give attention to the need to enact international conventions and treaties to protect species inhabiting international waters or those which migrate from country to country (no. 32), and that they increase their efforts in order to conclude an international agreement for a 10-year moratorium on international whaling (no. 33). Also, the Action Plan stresses that agreements should be reached concerning neighbouring or contiquous protected areas (no. 38) and, in general, Governments should take steps to set aside areas representing ecosystems of international significance for protection under international agreement (no. 38). The international programme to preserve the world's genetic resources which is advocated (no. 39-47) includes regulatory aspects at the same time as organizational ones. Recommendation 43, 3(a) may be guoted as an example of the recognition of the need for international regulation in this field. It states that it is essential that primeval forests, bushlands and grasslands which contain important forest genetic resources be identified and protected by appropritate technical and legal means. The Recommendation continues:

"systems of reserves exist in most countries, but a strengthening of international understanding on methods of protection and on availability of material may be desired".

Another aspect of the conservation of wild species which is particularly stressed is the concern for the living aquatic resources. It is recommended that Governments as well as international organizations take steps to support recent guidelines, recommendations and programmes of the various international fishing organizations. It is explicitly recognized that damage to fish stocks has often occurred because regulatory action is taken too slowly (no. 46), and it is implicitly stated that the marine environment and its resources must be safeguarded through the development of effective and workable principles and

laws (no. 47). Governments, the United Nations Secretariat and the specialised agencies should also take steps to ensure international cooperation in the control and regulation of side effects of national activities in resource utilization where these affect the aquatic resources of other nations (no. 47).

An intergovernmental organization, the Council of Europe, adopted, as early as October 27, 1967, a Resolution recommending that the member Governments speed up their programmes for the preservation of wild habitats and to promote, as a matter of urgency, the creation of areas for the complete protection of mammals and migratory birds, to give special attention to the control of pesticides, to beware of the danger to wildlife of the use of automatic weapons and of certain practices such as the use of poisoned eggs or bait, snares and nets and to prohibit the use of all mechanically propelled craft or vehicles for the pursuit, hunting, or shooting of game (Resolution (67)25).

In 1973, the Ministerial Conference on the European Environment, held in Vienna from 28 to 30 March, stressed the necessity to take, at the national level, appropriate legislative and administrative measures in order to safeguard as strictly as possible wild fauna and flora and their habitat. Some of these measures imply international cooperation (Resolution no. 3).

b. Existing International Regulation for the Protection of Wildlife

Distinctions according to their scope may be made among existing international treaty rules. Some of them have a general concern and are aimed at the protection of wildlife as a whole or at least concern a great number of species for vast areas, while others seek to protect only one or a few specific species of fauna and flora or apply to restricted regions. It is worth summarizing treaties of the first category, the second will only be mentioned. At the end of this section an attempt will be made to give an overview of the characteristics of international rules concerning the protection of wildlife and particularly of the methods applied by these rules to accomplish their objective.

i. Treaties of General Concern

 Convention for the Protection of Birds Useful to Agriculture, Paris, March 19, 1902.

The first of all the general conventions concerning the protection of wildlife was signed and ratified by 14 States, (all of them European) and is still in force. It makes a distinction between birds useful and harmful to agriculture and only the former are protected. The main principle of the Convention is that such useful birds enjoy absolute protection, but in fact the hunting of such birds in only forbidden between March 1 and September 15. Certain hunting methods are also prohibited as well as the destruction of the eggs or broods of young birds. An appendix provides lists of useful and harmful birds. Since the conclusion of the Paris Convention it has been understood how hazardous this distinction is and how dangerous the notion of "harmful species" can be for the natural balance. Hence, there existed a need for a new text, more in conformity with what we now know about ecology.

International Convention for the Protection of Birds, Paris, October 18, 1950.

This Convention was designed to replace the 1902 Convention. Unfortunately, it was ratified by only nine European States. It no longer makes a distinction between useful and harmful species; all birds are to be protected, at least during their breeding season, and migrants during their return flight to their nesting ground. During the same period, the removal or destruction of nests and the damaging or sale of eggs or broods of young birds are also prohibited, as well as the import, export, transport or sale of any live or dead bird or any part of a bird (Article 2-4). The Contracting Parties must prohibit hunting methods which would result in the mass killing or capture of birds or would cause unnecessary suffering (use of snares, bird-line, nets, traps, automatic weapons firing more than two cartridges, use of motor vehicles or air-borne machines to shoot or drive birds, etc.). The offering of rewards for the capture or killing of birds should also be prohibited (Article 5).

Exceptions from the prohibitions are provided for in the interests of science and education and in cases where, in a particular region, one species is found to be jeopardizing the future of certain agricultural or animal resources. The appropriate authorities may issue permits lifting the prohibitions established by the Convention (Articles 6 and 7).

Finally, according to the Convention, the Contracting States undertake to encourage and promote, by every possible means, the creation of water or land reserves where birds can nest and raise their broods safely and where migratory birds can also rest and find their food undisturbed (Article 11).

Convention Relative to the Preservation of Fauna and Flora in Their Natural State, London, November 8, 1933.

The first international agreement aiming at the protection of a great number of species concerns only a given area: the African territories of the Contracting States. The Contracting States could however extend its application by declaration to metropolitan territories not situated in Africa. In all cases, provisions concerning the traffic in trophies had to be enforced in those territories.

Presently, this Convention no longer concerns European States. Three African States: South Africa, Sudan and Tanzania are among the Contracting Parties.

In its preamble the Convention recognizes that the natural fauna and flora of certain parts of the world, and in particular in Africa, are in danger of extinction or permanent injury. Hence the necessity of a special regime for its protection, which can be best achieved by the establishment of National Parks and strict natural reserves and the enactment of regulations concerning the hunting, killing and capturing of animals outside such areas, by controlling traffic in trophies, and by prohibiting certain methods of and weapons for the hunting, killing and capturing of fauna.

However, the establishment of National Parks and strict natural reserves was not made mandatory. The only obligation Contracting States faced was to explore the possibility of doing so. Notification of the establishment of any National Park or natural reserve had to be made to the Government of the United Kingdom, and in cases in which it was proposed to establish a National Park or a reserve contiguous to a similar area situated in another territory, prior consultation was requisite between the competent authorities of the territories concerned (Articles 3-6).

Article 8 of the Convention declares that the protection of certain species is of special urgency and importance. An annex to the Convention enumerates those species and divides them into two classes. Species mentioned in Class A must to be protected as completely as possible, while animals belonging to Class B can be hunted, killed or captured only under special licence granted by the competent authorities. Article 9 provides for the prevention of the import or export of, or any dealing in, trophies other than those as have been originally killed, captured or collected in accordance with the laws and regulations of the territory concerned.

As to hunting methods, the use of motor vehicles or aircraft, the surrounding of animals by fires and, whenever possible, the use of poison or explosives for killing fish and the use of dazzling lights, flares, poison, nets, pits, traps or of set guns containing explosives for hunting animals is prohibited. It may be noted that the use of motor vehicles and aircraft for any purpose whatsoever, including that of filming or photographing must also be prohibited when it disturbs wild animals (Article 10).

African Convention on the Conservation of Nature and Natural Resources, Algiers, September 15, 1968.

The 1933 London Convention had to be replaced or renewed after the independence of former African colonies. The African Convention on the Conservation of Nature, adopted at the 5th ordinary session of the Assembly of Heads of States and Governments of the Organization of African Unity (Algiers, 1968) fulfills this task brilliantly, as it today is the most complete international treaty concerning the protection of wildlife. Nine African States and the Malagasy Republic are Parties to it.

The African Convention lays down the principle that the Contracting States have to take measures to ensure the utilization and the development of flora and fauna on the basis of scientific principles, taking into consideration the major interest of the population. For both flora and fauna, the Contracting Parties must adopt a conservation and utilization program. Especially in regard to flora, measures tending to maintain the extent of forest areas must be taken, and the conservation of species threatened with extinction must be ensured (Article VI). The conservation, rational utilization and development of fauna resources must also be ensured in the framework of land-use planning and for economic and social development. Control measures must be adopted

concerning the fauna inside as well as outside specially selected areas. Appropriate legislation is to be drafted in order to prohibit certain methods of hunting and fishing (mass killing, use of poison or explosives or both, use of motor vehicles, fire, automatic weapons, missiles containing explosives, nets, pits or enclosures, traps, snares, set guns, etc. for hunting). Like the 1933 London Convention, the African Convention is also completed by a list of protected species, divided into classes A and B. Species belonging to class A are completely protected while those belonging to class B can be hunted, killed, captured or collected under special licence granted by the competent authorities (Articles VII and VIII, Annex). Specimens of protected animals or plants as well as trophies of the latter cannot be exported or imported except with authorization; the trade and the transportation of other species is to be regulated by the Contracting States (Article IX).

The African Convention is less detailed than the 1933 London Convention in regard to natural reserves. It provides only that the Contracting States will maintain or, if necessary, enlarge existing natural reserves and will explore the necessity of establishing new ones, preferably in the framework of land-use planning. It also provides for the establishment of buffer zones around the borders of natural reserves, where activities which can be harmful to the protected natural resources need to be regulated (Article X).

Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, Washington, October 12, 1940.

This convention was signed and ratified by 17 American States and was signed but not ratified by another three. It is essentially dedicated to the establishment of National Parks. According to Article II, the Contracting Governments will explore at once the possibility of establishing parks and, in all cases where it is feasible, the creation of parks must begin as soon as possible. The resources of the reserves shall not be subject to exploitation for commercial profit; the hunting, killing and capturing of wild animals and the destruction or collection of wild plants shall be prohibited therein.

The Contracting Governments agree to adopt suitable laws and regulations for the protection of wildlife outside National Parks (Article V). In particular, Contacting States must adopt appropriate measures for the protection of migratory birds "of economic or aesthetic value" and prevent the extinction of any given species (Article VII). An Annex to the Convention lists species which it is of special urgency and importance to protect. Species included therein (which curiously have been determined country by country), must be protected as completely as possible and the hunting, killing, capturing or taking of them may only be allowed with the permission of appropriate government authorities in any one country (Article VIII). Moreover, every Government must take necessary measures to control and regulate the importation, exportation and transit of protected fauna or flora (Article IX).

A particularly interesting feature of the Washington Convention is that it includes in its scope of conservation measures those tending to protect and preserve natural scenery, striking geological formations, and regions and natural objects of aesthetic interest of historic or scientific value (Article V), as well as strict wilderness reserves (Article IV). The latter has been defined as a "region under public control characterized by primitive conditions of flora, fauna, transportation and habitation, wherein there is no provision for the passage of motorized transportation and all commercial developments are excluded".

Antarctic Treaty, Washington, December 1, 1959.

The treaty was designed to establish a firm foundation for the continuation and development of international cooperation on the basis of freedom of scientific investigation in Antarctica. There were originally 12 Contracting States to it; later on five other states acceeded to the treaty. Only one provision concerns wildlife. According to Article IX, Representatives of the original Contracting Parties shall meet at suitable intervals and places, for the purpose of exchanging information, consulting together on matters of common interest pertaining to Antarctica, and formulating, considering and recommending to their Governments measures in furtherance of the principles of the Treaty, including measures regarding *inter alia* prevention and conservation of living resources in Antarctica.

The implications of this provision turned out to be particularly important. At their third meeting held in 1964, the Representatives of the Contracting Parties agreed to recommend to their governments measures for the conservation of Antarctica fauna and flora. This text which has a preamble, 14 articles and 4 annexes, was to become effective after approval by all governments whose representatives were entitled to participate in the meeting. The main provisions of the agreed measures are contained in Articles VI to IX. They prohibit the killing wounding, capturing or molesting of any native mammals except with a permit issued only for a specific purpose, and under the condition that given scientific criteria are respected. Harmful interference with the living resources of native mammals is to be minimized. Areas of outstanding scientific interest are to be created as specially protected areas. Finally, the introduction into Antarctica of species which might upset the ecological balance will be prohibited 133.

Convention on Wetlands of International Importance, Especially as Waterfowl Habitat, Ramsar (Iran), February 2, 1971.

Wetlands have two fundamental ecological functions, as regulators of water regimes and as habitats of a characteristic flora and fauna, especially waterfowl. The Ramsar Convention recognizes these roles of wetlands. Article 2 provides that each Contracting Party shall designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance. The Contracting States shall formulate and implement their planning so as to promote the conservation of the wetlands included in the List, and, as far as possible, the wise use of

wetlands in their territory (Article 3). Nature reserves on wetlands shall also be established, whether they are included in the List of Wetlands or not. Consultation between Contracting States is provided for, especially in the case of a wetland extending over the territories of more than one of them or where a water system is shared by Contracting Parties. On 21 December 1975, the Convention entered into force. At that time eight States had ratified it.

Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris, November 23, 1972.

Considering that it is incumbent on the international community as a whole to participate in the protection of the cultural and natural heritage of outstanding universal value, the General Conference of UNESCO adopted in 1972 a convention which tends to establish an effective system of collective protection of the cultural and natural heritage.

The "natural heritage" includes geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation (Article 2). Each State Party to the Convention shall do all it can to ensure the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to and situated in its territory (Article 4); it is however, recognized that such heritage constitutes a world heritage for whose protection it is the duty of the international community as a whole to cooperate (Article 6).

The approach to the protection of the natural heritage is thus twofold, at State level and at the international level. First, the Contracting States accept certain obligations: to adopt a general policy which aims at giving the cultural and natural heritage a function in the life of the community and integrate the protection of that heritage into comprehensive planning programmes; to set up services for the protection, conservation and preservation of it; and to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, preservation and rehabilitation of that heritage (Article 5). Secondly, at the international level, the Convention establishes an intergovernmental committee for the protection of the cultural and natural heritage of outstanding universal value, called "the World Heritage Committee" within UNESCO, as well as a Fund called "the World Heritage Fund". Every State Party to the Convention shall submit to the World Heritage Committee an inventory of property forming part of the cultural and natural heritage: on the basis of the inventories submitted by States, the Committee shall establish, keep up to date and publish a "World Heritage List". Major operations will be necessary for the conservation of such property, to be included in a "List of World Heritage in Danger", established, kept up to date and published by the Committee (Article 11). Requests for international assistance may be addressed to the Committee by Contracting States, which decides on the action to be taken with regard to these requests (Article 13). Assistance may take various forms, such as studies concerning the scientific and technical problems raised by the protection, conservation, preservation and rehabilitation of the natural heritage, provision of experts, training of staff and specialists, supply of equipment, low-interest or interest-free loans and, in exceptional cases and for special reasons, the granting of non-repayable subsidies (Article 22).

The States Parties to the Convention shall submit to the General Conference of UNESCO reports giving information on the legislative and administrative provisions which they have adopted and other action which they have taken for the application of the Convention.

It is hoped, that, when implemented, the Convention will result in the creation of a world network of protected areas insuring to a certain extent the protection of certain species.

- European Convention for the Protection of Animals During International Transport, Paris, December 13, 1968.

This European Convention was drafted in the framework of the Council of Europe, and of the eighteen Member States of that organization, fourteen are Contracting Parties. It concerns all types of animals. The first four chapters are related to domestic animals. Chapter V provides that mammals and birds which are not already covered by the provisions of the preceding chapters shall be subject to the application of designated articles of the Convention. These provisions concern the conditions of international transport in general and include special rules for transport by railway, by road, by water and by air. Article 43 of the Convention, related particularly to wild animals, provides that they shall only be transported in suitably constructed vehicles or containers. In addition, if necessary, there shall be directions on the containers stating that there are wild animals inside which may be nervously timid or dangerous. Also, clear written instructions about feeding, watering and any special care were made requisite. Chapter VI is especially concerned with cold-blooded animals, which must be transported in special containers, with particular requirements as to space, ventilation, temperature, water and oxygen.

 Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, March 3, 1973.

International cooperation is essential for the protection of certain species of wild fauna and flora against over-exploitation through international trade. This is the reason why a great number of States entered into the 1973 Washington Convention. At present it is one of the main world-wide treaties concerning the protection of wildlife. It went into force upon the ratification of ten States in July 1975. The System of protection is based on a distinction between three sorts of species, listed in three separate appendices to the Convention.

Appendix I includes all species threatened with extinction which are or may be affected by trade. Trade in specimens of these species may only occur subject to particularly strict regulation. Appendix II includes all species which may either become threatened with extinction unless trade is subject to strict regulation or which must be subject to regulation in order that trade may be brought under effective control. Appendix III includes all species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the cooperation of other parties in the control of trade in them. The Convention concerns any animal or plant, whether alive or dead. Rules do differ however, as to the parts or derivatives of the protected species according to the different appendix categories.

For all three categories the export, the import and the re-export of any specimen of a listed species requires the prior grant and presentation of a permit or a certificate of origin. The conditions for granting such a permit are, however, different from one category to the other. They are the most rigorous for the export of specimens included in Appendix I. A scientific authority of the State of export must advise that such export will not be detrimental to the survival of that species, and a management authority of the same State must be satisfied that the specimen was not obtained in contravention of the laws of that State. In addition, any living specimen must be so prepared and shipped as to minimize the risk of injury, damage to health or cruel treatment. Finally, proof must exist that an import permit has been granted for the specimen. The import of the same category of species require the prior grant and presentation of an import permit and either an export or a re-export certificate. Necessary conditions for the trade in these species as well as conditions for the grant of a re-export certificate are found in Article III.

The conditions for trade in Appendices II and III species are less rigorous but they still are under strict control. In particular their export requires the prior grant and presentation of an export permit.

The Parties are entrusted with the enforcement of the provisions of the Convention. These include the penalization for trade in, or possession of, concerned specimens and the confiscation or return to the State of export of such specimens. Each Party must maintain records of trade in specimens of species included in the three Appendices and must prepare periodic reports on the implementation of the Convention and transmit such reports to the Secretariat. Meetings of the Conference of the Contracting Parties will be held regularly and the Secretariat will be provided by the Executive Director of UNEP.

ii. Treaties Concerning Limited Areas

Some treaties contain one or more provisions related to the protection of wildlife in general, but they concern only a limited number of countries.

- The Treaty on the Status of Spitzberg, signed on February 9, 1920 in Paris, provides in its Article 2 that it is incumbent on Norway to maintain or take suitable measures to ensure the preservation of and, if necessary, the reconstitution of the fauna and flora of the archipelago of Spitzberg, Bear Island and the territorial waters thereof.
- The Convention and Statute Relating to the Development of the Chad Basin, of May 22, 1964, signed by Cameroon, Niger, Nigeria and Chad, states that the exploitation of the Chad Basin and especially the utilization of surface and underground waters, refers in particular to the needs of domestic industrial and agricultural development and the entirety of its fauna and flora products (Statute, Article 4). The Member States pledge to refrain from adopting, without referring to the Commission established by the Convention, any measures likely to exert a marked influence inter alia upon the biological characteristics of the fauna and the flora of the Basin.
- Treaties concerning the regime of frontiers concluded by the USSR with its neighbours often contain provisions concerning wildlife. Article 20 of the agreement of November 30, 1956 with Czechoslovakia and Article 16 of the agreement of December 29, 1949 with Norway similarly provide that the competent authorities of the Contracting Parties shall, where necessary, agree on all matters relating to the preservation of game-animals and birds and on identical closed seasons in specified parts of the frontier. Both treaties (respectively Articles 21 and 17), as well as Article 24 of the Agreement of July 8, 1949 with Poland, provide further that each Contracting Party shall conduct its forestry in land adjacent to the frontier so as not to harm the forestry of the other Contracting Party. If a forest fire breaks out near the frontier, the Contracting Party in whose territory the fire began shall take all due and possible steps to localize and extinguish it and to prevent it from spreading across the frontier. The parties further agree to notify each other when a forest fire threatens to spread across the frontier. The agreement of January 18, 1958 with Afghanistan includes provisions similar to those above (Article 23), but also provides for the protection of fish in the watercourses constituting the frontier (Article 22).
- Conventions concerning the conservation of living resources have been concluded for different seas of the world. Ecuador, Chile, and Peru signed on August 18, 1952 in Santiago a Declaration on the Maritime Zone, a Joint Declaration on Fishery Problems in the South Pacific and an Agreement on the Organization of the Permanent Commission of the Conference on the Use and Conservation of the Marine Resources of the South Pacific. At a second conference, held in Lima, in 1954, the same three States signed an Agreement relating to the issuance of permits for the exploitation of the maritime resources of the South Pacific. Since 1972, the Permanent Commission established by the 1952 Agreement has periodically held meetings and has adopted various regulations, which concern, inter alia, whaling 134.

Japan, South Africa, and seven European States signed in Rome, on October 23, 1969, a *Convention on the Conservation of the Living Resources of the Southern Atlantic*. The Convention applies to all fish and other living resources¹³⁵.

The Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts, signed at Gdansk (Poland) on September 13, 1973 by seven coastal States of the Baltic Sea applies also to all fish species and other living marine resources. It establishes an International Baltic Sea Fishery Commission whose duty is to keep under review the living resources and the fisheries in the Convention area and to prepare and submit recommendations for consideration of the Contracting States concerning measures for the regulation of fishing methods, improving and increasing the living marine resources and regulating between the Contracting States the amount of total catch.

iii. Treaties Concerning Determined Species

While the protection of specific species can be ensured by treaties of a general scope or treaties concerning a limited area, there are special conventions relating to one or a group of species. Their geographic scope may be different according to the necessities of conservation and the possibilities to conclude such agreements.

As there are more than 20 treaties concerning specific species or groups of species we shall only enumerate them here.

A. Protection of Rirds

In addition to the 1902 Convention for the Protection of Birds Useful to Agriculture and the 1950 Paris Convention for the Protection of Birds, there is a Benelux Convention on the Hunting and Protection of Birds, signed in Brussels on June 10, 1970 by Belgium, Luxemburg and the Netherlands. Also, the Committee of Ministers of the Council of Europe adopted two Resolutions requiring special protection for birds in Europe¹³⁶.

Migratory birds need special protection at the international level. There are five bilateral treaties in this regard.

- Convention between the USA and Great Britain for the Protection of Migratory Birds, Washington, August 16, 1916;
- Convention between the USA and Mexico for the Protection of Migratory Birds and Game Mammals, Mexico City, February 7, 1936;
- Convention between the USA and Japan for the Protection of Migratory Birds in Danger of Extinction and Their Environment, Tokyo, March 4, 1972;
- Convention between Japan and USSR for the Protection of Migratory Birds and Birds in Danger of Extinction, of Their Environment and of their Habitat, Moscow, October 10, 1973;

- Agreement between Japan and Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and Their Environment, Tokyo, February 6, 1974.

B. Protection of Seals

- Treaty between Great Britain and the USA for the Preservation and Protection of Fur Seals, Washington, February 7, 1911;
- Convention for the Preservation and Protection of Fur Seals in the North Pacific, July 7, 1911 (Great Britain, USA, Japan, Russia);
- Interim Convention on Conservation of North Pacific Fur Seals, February 9, 1957, (Canada, Japan, USSR, USA); amended by a Protocol of October 8, 1963, signed in Washington;
- Agreement between Norway and USSR on Measures for Regulating the Catch and Conserving Stocks of Seals in the North-Eastern part of the Atlantic Ocean, Oslo, November 22, 1957;
- Convention for the Conservation of Antarctic Seals, London, February 11, 1972 (Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, USSR, USA).

C. Protection of Polar Bears

An Agreement on the Conservation of Polar Bears has been signed at Oslo, on November 15, 1973, by Canada, Denmark, Norway, USSR and USA.

D. Protection of Salmon

- Treaty concerning the Regulation of Salmon Fishery in the Rhine River Basin, Berlin, June 30, 1885 (Germany, Luxemburg, Netherlands, Switzerland);
- Convention between the USA and Canada concerning Sockeye and Pink Salmon Fisheries, Washington, May 26, 1930, amended by a Protocol signed at Ottawa on December 28, 1956;
- Agreement on the Protection of the Salmon in the Baltic Sea, Stockholm, December 20, 1962 (Denmark, Federal Republic of Germany, Sweden).

E. Protection of Whales

- Convention for the Regulation of Whaling, Geneva, September 24,
 1931 (about 46 States have signed this Convention);
- International Convention for the Regulation of Whaling, Washington, December 2, 1946 (14 States are Parties to this Convention).

F. Protection of Shellfish

- Agreement Concerning Measures for the Protection of the Stocks of Deep-Sea Prawns, European Lobsters, Norway Lobsters and Crabs, Oslo, March 7, 1952 (Denmark, Norway, Sweden);
- Convention for the Conservation of Shrimp, Havana, August 15, 1958 (Cuba, USA);
- Agreement on King Crab Fishing of Alaska, Washington, November 25, 1964 (Japan, USA).

iv. Methods of Protection in International Conventions concerning Wildlife

International conventions use various methods for protecting various species. Prohibition of killing, capturing or collecting specimens of endangered species of fauna and flora are the most extreme ones. Such measures are rarely absolute and mainly concern bird eggs, broods or young animals or species living in National Parks or reserves. Outside these areas conservation measures such as the prohibition of certain methods of hunting or fishing, zoning, the establishment of hunting or fishing seasons, and the development of quota systems for specimens which can be killed, captured or collected, etc., are provided for. Habitat protection is realized to be more and more a fundamental requirement for meaningful protection. Another newly developed important protection measure has been to regulate the international transport and trade in endangered species.

Of course, various methods of protection can be used simultaneously in the same treaty. Measures of supervision are frequently used as a complement to protection methods. It is also often that international organs, such as international commissions, frequently established by the treaty itself, are entrusted not only with control measures but also with the drafting of more detailed or even new regulations. However, the implementation of the protective measures is generally a task imparted to the States.

Examples for the various aspects of the methods of protection will be given hereafter.

A. General Prohibitions

- Treaty for the Protection of Birds Useful to Agriculture, Paris, March 19, 1902 (Article 1 prohibits the killing of birds and the destruction of nests, eggs, and broods of young birds);
- Convention USA Great Britain for the Protection of Migratory Birds, Washington, August 16, 1916 (Article V prohibits the taking of nests or eggs);
- Convention for the Regulation of Whaling, Geneva, September 24, 1931 (Article 5 prohibits the taking or killing of calves or suckling whales, immature whales, and female whales which are accompanied by calves or suckling whales);

- Convention USA Mexico for the Protection of Migratory Birds and Game Mammals, Mexico City, February 7, 1936 (Article II E prohibits the killing of migratory insectivorous birds);
- International Convention for the Regulation of Whaling, Washington, December 2, 1946 (The Schedule adopted by the Commission established under this Convention prohibits the taking or killing of grey whales, calves or suckling whales or female whales which are accompanied by calves or suckling whales);
- Agreement USSR Norway on Measures for Regulating the Catch and Conserving Stocks of Seals in the North-Eastern part of the Atlantic Ocean, Oslo, November 22, 1957 (Par. 4 of the Annex prohibits the taking of walruses throughout the year);
- African Convention on the Conservation of Nature and Natural Resources, Algiers, September 15, 1968 (Article VIII prohibits the hunting, killing, or capture of species listed in Class A).
- Convention for the Conservation of Antarctic Seals, London, February 11, 1972 (The Annex forbids the killing or capture of Ross seals, Southern elephant seals or fur seals of the genus Arctocephalus).
- Agreement on the Conservation of Polar Bears, Oslo, November 15, 1973 (Article 1 prohibits the taking of polar bears, which includes hunting, killing and capturing).

Nearly all these treaties provide for exceptions. Article III of the 1973 Oslo Agreement on the Conservation of Polar Bears is particularly characteristic when providing:

- "... any Contracting Party may allow the taking of polar bears when such taking is carried out:
- a) for bona fide scientific purpose; or
- b) by that party for conservation purposes; or
- c) to prevent serious disturbance of the management of other living resources, subject to forfeiture to that Party of the skins and other items of value resulting from such taking; or
- d) by local people using traditional methods in the exercise of their traditional rights and in accordance with the laws of that Party; or
- e) wherever polar bears have or might have been subject to taking by traditional means by its nationals."
- B. Prohibitions of Certain Means of Hunting and Fishing
 - Treaty Concerning the Regulation of Salmon Fishery in the Rhine River Basin, Berlin, June 30, 1885 (Article Land II);

- Treaty for the Protection of Birds Useful to Agriculture, Paris, March 19, 1902 (Articles 2 and 3);
- Convention USA Great Britain for the Protection of Migratory Birds, Washington, August 16, 1916 (Article IV);
- Convention Relative to the Preservation of Fauna and Flora in Their Natural State, London, November 8, 1933 (Article 10);
- Convention USA Mexico for the Protection of Migratory Birds and Game Mammals, Mexico, February 7, 1936 (Article II, F.);
- International Convention for the Regulation of Whaling, Washington, December 2, 1946 (Schedule, par. 10-12);
- International Convention for the Protection of Birds, Paris, October 18, 1950 (Article 5);
- Agreement Norway USSR on Measures for Regulating the Catch and Conserving Stocks of Seals in the North-Eastern Part of the Atlantic Ocean, Oslo, November 22, 1957 (Annex, par. 5 and 6);
- Treaty Afghanistan USSR on the Regime of the Frontier, Moscow, January 18, 1958 (Article 22);
- Agreement on the Protection of the Salmon in the Baltic Sea, Stockholm, December 20, 1962 (Article 5);
- Agreement Japan USA on King Crab Fishing off Alaska, Washington, November 25, 1964 (Appendix);
- Convention for the Conservation of Antarctic Seals, London, February 11, 1972 (Annex, par. 7);
- Agreement on the Conservation of Polar Bears, Oslo, November 15, 1973 (Article IV).

The most complete provision is to be found in Article 10 of the 1933 London Convention Relative to the Preservation of Fauna and Flora:

- "1. The use of motor vehicles or aircraft (including aircraft lighter than air) shall be prohibited in the territories of the Contracting Governments, both (i) for the purpose of hunting, killing or capturing animals, and (ii) in such manner as to drive, stampede, or disturb them for any purpose whatsoever including that of filming or photographing; ...
- 2. The Contracting Governments shall prohibit in their territories the surrounding of animals by fires for hunting purposes. Wherever possible, the under-mentioned methods of capturing or destroying animals shall also be generally prohibited:

- a) The use of poison, or explosives for killing fish;
- b) The use of dazzling lights, flares, poison or poisoned weapons for hunting animals;
- c) The use of nets, pits or enclosures, gins, traps or snares, or of set guns and missiles containing explosives for hunting animals".

C. Establishment of Closed Seasons

- Treaty Concerning the Regulation of Salmon Fishery in the Rhine River Basin, Berlin, June 30, 1885 (Articles III-V);
- Treaty for the Protection of Birds Useful to Agriculture, Paris, March 19, 1902 (Article 5);
- Convention USA Great Britain for the Protection of Migratory Birds, Washington, August 16, 1916 (Article II);
- Convention Mexico USA for the Protection of Migratory Birds and Game Mammals, Mexico City, February 7, 1936 (Article II);
- International Convention for the Protection of Birds, Paris, October 18, 1950 (Articles 2 and 4);
- Agreement Norway USSR on Measures for Regulating the Catch and Conserving Stocks of Seals in the North-Eastern part of the Atlantic ocean, Oslo, November 22, 1957 (Annex);
- Agreement Canada Norway on Sealing and the Conservation of the Seal Stock in the North-West Atlantic, Ottawa, July 15, 1971 (proposal of the Commission established under the Agreement) 137;
- Convention for the Conservation of Antarctic Seals, London, February 11, 1972 (Annex, par. 3);
- Convention between Japan and USSR for the Protection of Migratory Birds and Birds in Danger of Extinction, of Their Environment and of Their Habitat, Moscow, October 10, 1973 (Article II);
- Agreement Australia Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and Their Environment, Tokyo, February 6, 1974 (Article II).

Article II of the 1936 Convention between Mexico and the USA summarizes particularly well the problems raised by the establishment of closed seasons:

"The High Contracting Parties agree to establish laws, regulations and provisions ... including:

A) The establishment of closed seasons, which will prohibit in certain periods of the year the taking of migratory birds, their nests or eggs, as well as the transportation or sale, alive or dead, of their products or parts, except when proceeding with appropriate authorization, from private game farms or when used for scientific purposes for propagation, or for museums...."

D. Establishment of Quotas

- International Convention for the Regulation of Whaling, Washington, December 2, 1946 (Schedule drafted by the Commission established by the Convention, par. 8);
- International Convention for the North-West Atlantic Fisheries, Washington, February 8, 1949 (Regulatory measures proposed by the Permanent Commission established under the Convention);
- Agreement Japan USA on King Crab Fishing off Alaska, Washington, November 25, 1964 (no. 1);
- Agreement Canada Norway on Sealing and the Conservation of the Seal Stock in the North-West Atlantic, Ottawa, July 15, 1971 (Proposal of the Commission established under the Agreement)¹³⁸;
- Convention for the Conservation of Antarctic Seals, London, February 11, 1972 (Annex, par. 1).

It may be noted that all these provisions concern hunting and fishing in international areas (high seas, Antarctica).

As an example of the establishment of quotas one may quote paragraph 3, 1) of the 1964 Agreement between Japan and the USA on King crab Fishing off Alaska:

"The king crab fishery by nationals and vessels of Japan in the eastern Bering Sea will continue in and near the waters which have been fished historically by Japan, that is, those waters in which migrate the king crab stocks exploited historically by Japan, provided that, in order to avoid possible overfishing of the king crab resource in the eastern Bering Sea, the Government of Japan ensures that the annual commercial catch of king crabs by nationals and vessels of Japan for the years 1965 and 1966 shall be equivalent to 185,000 cases respectively (one case being equivalent to 48 half-pound cans)".

Moreover, one may add that two treaties for the preservation and the protection of fur seals concluded in 1911, one between the United Kingdom and the United States, the other between the same States, Japan and Russia, establish a very interesting system which ensures the repartition of the benefits of fur seal hunting on the Pribilof Islands¹³⁹.

E. Zoning: Prohibition to Hunt or Fish in Certain Areas

- Treaty between Great Britain and the USA for the Preservation and Protection of Fur Seals, Washington, February 7, 1911 (prohibition of Sealing at sea in determined areas by Article I);
- Convention for the Preservation and Protection of Fur Seal in the North Pacific Ocean, Washington, July 7, 1911 (Article I, quoted below, prohibits sealing at sea in determined areas);
- Convention USA Mexico for the Protection of Migratory Birds and Game Mammals, Mexico City, February 7, 1936 (Article II, B provides for the establishment of refuge zones in which the taking of migratory birds is forbidden);
- International Convention for the Regulation of Whaling, Washington, December 12, 1946 (The Schedule adopted by the International Whaling Commission under the Convention forbids the use of factory ships in determined areas);
- Antarctic Treaty, Washington, December 1, 1959 (The Consultative Meetings held under the Treaty recommended the establishment of seal reserves. This recommendation was accepted by all States participating in the Consultative meetings and became effective as from the 1969-70 sealing season) 140;
- Convention for the Conservation of Antarctic Seals, London, February 11, 1972 (Par. 5 of the Annex establishes seal reserves where it is forbidden to kill or capture seals).

Article I on the Convention for the Preservation and Protection of Fur Seals (Washington, July 7, 1911) may be quoted as an example for prohibition of hunting in designated areas. At the same time it provides a very progressive pattern of international surveillance:

"The High Contracting Parties mutually and reciprocally agree that their citizens and subjects respectively, and all persons subject to their laws and treaties, and their vessels, shall be prohibited, while this Convention remains in force, from engaging in pelagic sealing in the waters of the North Pacific Ocean, north of the thirtieth parallel of north latitude and including the Seas of Bering, Kamchatka, Okhotsk and Japan, and that every such person and vessel offending against such prohibition may be seized, except within the territorial jurisdiction of one of the other Powers, and detained by the naval or other duly commissioned officers of any of the Parties to this Convention, to be delivered as soon as practicable to an authorized official of their own nation at the nearest point to the place of seizure, or elsewhere as may be mutually agreed upon; and that the authorities of the nation to which such person or vessel belongs alone shall have jurisdiction to try the offense and impose the penalties for the same; and that the witnesses and proofs necessary to establish the offense, so far as they are under the control of any of the Parties to this Convention, shall also be furnished with all reasonable promptitude to the proper authorities having jurisdiction to try the offense".

v. Protection of the Habitat of Determined Species

- Convention Japan USA for the Protection of Migratory Birds in Danger of Extinction and Their Environment, Tokyo, March 4, 1972 (According to Article VI, each Contracting Party shall endeavor to take appropriate measures to preserve and enhance the environment of the protected birds, in particular by seeking means to prevent damage to such birds and their environment):
- Agreement Australia Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and Their Environment, Tokyo, February 6, 1974 (Article V provides that each Government shall endeavour to establish sanctuaries and other facilities for the management and protection of migratory birds and birds in danger of extinction and also of their environment. According to Article VI, appropriate measures have to be taken to preserve and enhance the environment of birds protected under the Agreement);
- Convention between Japan and USSR for the Protection of Migratory Birds and Birds in Danger of Extinction, of their Environment and of their Habitat, Moscow, October 10, 1973 (Article VI is similar to Article VI of the 1972 Convention between Japan and USA);
- Agreement on the Conservation of Polar Bears, Oslo, November 15, 1973 (Article II).

The last provision may be quoted as an example of the modern formulation of the requirement (which also may be considered as a new one) to also protect the environment of endangered species:

"Each Contracting Party shall take appropriate action to protect the ecosystems of which polar bears are a part, with special attention to habitat components such as denning and feeding sites and migration patterns and shall manage polar bear populations in accordance with sound conservation practices based on the best available scientific data".

vi. Establishment of Reserves and Parks

The following definitions have been given in Article 2 of the Convention Relative to the Preservation of Fauna and Flora in their Natural State, signed in London, on November 8, 1933:

"The expression "National Park" shall denote an area (a) placed under public control, the boundaries of which shall not be altered or any portion be capable of alienation except by competent legislative authority, (b) set aside for the propagation, protection and preservation of wild animal life and wild vegetation, and for the preservation of objects of aesthetic, geological, prehistoric, historical, archaeological, or other scientific interest for the benefit, advantage, and enjoyment of the general public, (c) in which the

hunting, killing, or capturing of fauna and the destruction or collection of flora is prohibited except by or under the direction or control of the park authorities".

"The term "strict natural reserve" shall denote an area placed under public control, throughout which any form of hunting or fishing, any undertakings connected with forestry, agriculture or mining, any excavations or prospecting, drilling, levelling of the ground, or construction, any work involving the alteration of the configuration of the soil or the character of the vegetation, any act likely to harm or disturb the fauna or flora, and the introduction of any species of fauna and flora, whether indigenous or imported, wild or domesticated, shall be strictly forbidden; which it shall be forbidden to enter, traverse or camp in without a special written permit from the competent authorities; and in which scientific investigations may only be undertaken by permission of those authorities".

Several treaties provide that the Contracting Parties will explore the possibility of establishing parks and reserves and maintain and develop existing ones:

- Convention Relative to the Preservation of Fauna and Flora in Their Natural State, London, November 8, 1933 (Articles 3-7);
- Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, Washington, October 12, 1940 (Articles II-IV):
- African Convention on the Conservation of Nature and Natural Resources, Algiers, September 15, 1968 (Article X);
- Convention on Wetlands of International Importance, Especially as Waterfowl Habitat, Ramsar, February 2, 1971 (Article 4);
- Convention between Japan and USSR for the Protection of Migratory Birds in Danger of Extinction, Moscow, October 10, 1973

vii. Restrictions on Trade in Endangered Species

Before the signature of the Washington Treaty on International Trade in Endangered Species of Wild Fauna and Flora, on March 3, 1973¹⁴¹, a great number of treaty-provisions limited such trade, not only at international, but also at national levels:

- Treaty for the Protection of Birds Useful to Agriculture, Paris, March 19, 1902 (Articles 2, 5, 6, 8);
- Convention Great Britain USA for the Protection of Migratory Birds, Washington, August 16, 1916 (Article VI);

- Convention Relative to the Preservation of Fauna and Flora in Their Natural State, London, November 8, 1933 (Article 9);
- Convention Mexico USA for the Protection of Migratory Birds and Game Mammals, Mexico City, February 7, 1936 (Article II (A) and III);
- Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, Washington, October 12, 1940 (Article IX concerns only importation, exportation and transit);
- International Convention for the Protection of Birds, Paris, October 18, 1950 (Articles 3 and 9);
- Agreement on the Protection of the Salmon in the Baltic Sea, Stockholm, December 20, 1962 (Article 7);
- African Convention on the Conservation of Nature and Natural Resources, Algiers, September 15, 1968 (Article IX);
- Benelux Convention on the Hunting and Protection of Birds, Brussels, June 19,1970 (Articles 5, 8, 9);
- Convention Japan USA for the Protection of Migratory Birds in Danger of Extinction and Their Environment, Tokyo, March 4, 1972 (Articles III, IV);
- Agreement on the Conservation of Polar Bears, Oslo, November 15, 1973 (Article III, par. 2 and V);
- Agreement Australia Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and Their Environment, February 6, 1974 (Article II, par. 2).

viii. Establishment of International Commissions or use of Existing International Organs

- Treaty Concerning the Regulation of Salmon Fishery in the Rhine River Basin, Berlin, June 30, 1885 (Article X provides for periodic meetings of the representatives of the Contracting States);
- International Convention for the Regulation of Whaling, Washington, December 2, 1946 (Articles III-IV establish the International Whaling Commission empowered to amend the Schedule attached to the Convention and to make recommendations to the Contracting Governments¹⁴²);
- International Convention for the North-West Atlantic Fisheries, Washington, February 8, 1949 (Articles II-XI establish a Permanent Commission entrusted with regulatory powers);

- Agreements of the Conference on the Use and Conservation of the Marine Resources of the South Pacific (1952-1967; Chile, Ecuador, Peru) and in particular the Agreement relating to the Organisation of the Permanent Commission of the Conference and the Agreement relating to the regular annual meetings of the Permanent Commission which is entrusted with regulatory powers¹⁴³);
- Agreement Concerning Measures for the Protection of the Stocks of Deep-Sea Prawns, Norway Lobsters, European Lobsters and Crabs, Oslo, March 7, 1952 (Article 7 provides for the setting up of a Commission which can make recommendations to the Contracting Governments):
- Interim Convention on Conservation of North Pacific Fur Seals, Washington, February 9, 1957 as amended by the Protocol, signed in Washington, October 8, 1963 (According to Article V the Commission established under the Interim Convention recommends appropriate conservation measures to the Parties and determines from time to time the number of seals to be marked on the roockery islands, as well as the total number of seals which shall be taken);
- Agreement Norway USSR on Measures for Regulating the Catch and Conserving Stocks of Seals in the North-Eastern part of the Atlantic Ocean, Oslo, November 22, 1957 (According to Articles III-VII, a Commission is set up which can propose to the Contracting Governments regulations governing the hunting operations and measures for the control of their implementation);
- Convention Cuba USA for the Conservation of Shrimp, Havana, August 15, 1958 (Article II provides for the establishment of a Commission for the Conservation of Shrimp in the Eastern Gulf of Mexico which can adopt regulations, becoming effective 60 days following notification to the Contracting Governments unless an objection has been lodged with the Commission);
- Antarctic Treaty, Washington, December 1, 1959 (Article IX provides for periodic meetings of representatives of the original Contracting Parties. The Antarctic Treaty Consultative Meetings formulate and recommend measures regarding, *inter alia*, the preservation and conservation of living resources in Antarctica);
- Agreement on the Protection of the Salmon in the Baltic Sea, Stockholm, December 20, 1962 (Article 10 establishes a Commission which may make proposals concerning the modification of the Agreement);
- Convention and Statutes Relating to the Development of the Chad Basin, Fort-Lamy, May 22, 1964 (Article 1 of the Convention sets up a Commission to which the Contracting Parties have to refer, according to Article 5 of the Statute, before adopting measures likely to exert a marked influence inter alia upon the biological characteristics of the fauna and the flora of the Chad Basin);

Convention on the Conservation of the Living Resources of the Southeast Atlantic, Rome, October 23, 1969 (Article III of the Convention provides that the Commission created under it may prepare arrangements or agreements);

- Benelux Convention on the Hunting and Protection of Birds, Brussels, June 10, 1970 (According to Article 11, the Committee of Ministers of Benelux may adopt exceptions from certain provisions of the Convention);
- Agreement Canada-Norway on Sealing and the Conservation of the Seal Stock in the North-West Atlantic, Ottawa, July 15, 1971 (The Commission established by the Agreement is entrusted with the function to submit proposals to the Contracting Parties with regard to sealing and the conservation of seal stocks and the establishment of inspection and control procedures);
- Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts, Gdansk, September 13, 1973 (Article V establishes a Baltic Sea Fishery Commission which is entrusted with a central role in the system of the Convention: essentially monitoring the living resources of the Baltic Sea and adoption of recommendations to the Contracting Parties to which effect must be given by non-objecting States. However, if objections to a recommendation are made by three or more Contracting States, the other Contracting States shall be relieved forthwith of any obligation to give effect to that recommendation (Articles X and XI). It is further provided that the Commission shall cooperate with other international organizations having related objectives and may invite any international organization or any Government to participate as an observer in its meetings (Article XV)).

In some cases subsequent conferences of the Contracting Parties have been provided for (Treaty for the Protection of Birds Useful to Agriculture of March 19, 1902, Article 12). The Conference may be periodical (Convention Relative to the Preservation of Fauna and Flora in Their Natural State, of November 8, 1933, Protocol) and may even be granted a Secretariat (Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora, of March 3, 1973, Articles XI-XIII).

THE PRINCIPAL CHARACTERISTICS OF INTERNATIONAL REGULATION FOR THE PROTECTION OF THE ENVIRONMENT

The most striking feature of international regulation in this field has been its quick development. There is even an acceleration in the drafting and adoption of international law rules, be they "soft law" or "hard law", concerning the protection of the environment since the end of the 1960's. One may consider that this phenomenon is due to the progressive deterioration of certain components of the environment (sea, international rivers), but what seems to be even more important is a growing world-wide awareness of the problems. The evolution of rules tending to prevent the pollution of the oceans is particularly characteristic in this regard.

Regulations for environmental protection thus adopted have been drafted at world-wide, regional and local levels. Recommendation 86 of the Stockholm Action Plan is a good illustration of the need to act at different levels. It recommends that Governments:

"(c) Ensure that ocean dumping by their nationals anywhere, or by any person in areas under their jurisdiction, is controlled and that Governments shall continue to work towards the completion of, and bringing into force as soon as possible of, an overall instrument for the control of ocean dumping as well as needed regional agreements within the framework of this instrument, in particular for enclosed and semi-enclosed seas, which are more at risk from pollution".

As a matter of fact, international conventions concerning ocean dumping provide a good example of the combination of an overall instrument (the 1972 London Convention), with regional agreements - (the Oslo, Helsinki and Mediterranean Conventions) 144 to attack an environmental problem.

Various considerations determine whether a subject should be dealt with at universal, regional or local levels. Overall instruments seem to be particularly adapted for promoting general principles or general rules, while the solution of concrete problems may be more easily found in regional or local agreements. Treaties concerning the pollution of rivers and lakes are a good example of the way in which local or, at most, regional needs can be met. Still, the example of the Council of Europe, which has adopted several declarations and charters - on water, air and soil, as well as various recommendations on principles governing the protection of the environment, shows that the formulation of general rules in a regional framework in view of the harmonization of national legislation can be effective.

Thus one may consider that in certain cases, drafting and adopting international regulation may be easier in a more restricted circle of States, which have similar interests, economic and social structures, than in a world-wide framework. The existence of regional organizations, the European Communities, the Council of Europe, the Nordic Council or Benelux, as well as cooperation between bordering States (e.g. between USA and Canada) can indeed promote the creation of rules to protect the environment.

As our knowledge of the biosphere is still progressing and as new dangers for the environment are liable to arise from new inventions and activities, it is necessary to provide not only for new rules but also for the modification or adaptation of existing ones. Thus, international regulation concerning the protection of the environment has a characteristic which may be of the utmost importance for general international law. Again, Recommendation 86 of the Stockholm Action Plan may be quoted, which tends to:

"(b) Ensure that adequate provisions are made for reviewing the effectiveness of, and revising existing and proposed international measures for control of marine pollution".

Two different methods are generally used for ensuring the adaptation of existing rules to new requirements. The first is to provide for simple and speedy procedures for the revision of the rules laid down by treaties. Article 29 of the European Draft Convention for the Protection of International Watercourses against Pollution provides a good example. A committee of government experts may propose amendments or supplements to the Appendices of the Convention. Upon a unanimous decision of the representatives of the Contracting Parties of the Committee of Ministers of the Council of Europe, the amended or supplemented text shall enter into force.

The second method for ensuring the constant adaptation of international instruments implying rules for the protection of environment is the creation of a special organ entrusted with regulatory powers. Commissions set up by treaties tending to protect wildlife are particularly characteristic of this method ¹⁴⁵.

The main characteristics of the legislative techniques used in international regulation concerning the protection of environment may be summarized as follows:

- 1. As in municipal law systems, it seems almost impossible to draft at the international level one inclusive regulation, a sort of general Code of Environmental Law, concerning all the aspects of the protection of environment (pollution control, protection of wildlife, protection of soil, of landscapes, etc.). Of course, general statements, like the Stockholm Declaration, can be adopted and applied in proposing principles for all subjects relating to environment, but no strict, hard law rules can be made from them. As the example of Scandinavian States' legislation shows, separate codes are necessary for A) pollution control (which may include all kinds of nuisances) and, B) the protection of nature, wildlife, landscapes, etc. As a matter of fact, each of the two fields involve special legislative techniques, as activities to be restricted as well as protective measures to be adopted are generally different.
- 2. Most treaties on environmental protection must be implemented by the Contracting States. Since they are usually not self-executing, the need arises for adoption by the governments involved of internal implementing rules. Article VIII of the 1973 Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora is particularly characteristic:
 - "1. The Parties shall take appropriate measures to enforce the provisions of the present Convention and to prohibit trade in speimens in violation thereof. These shall include measures:
 - to penalize trade in, or possession of, such specimens, or both; and
 - b) to provide for the confiscation or return to the State of export of such specimens ..."
- 3. The prohibition of environmentally damaging activities constitutes the simplest form of environmental protection. It is rarely as general and absolute as Article 1 of the 1963 Moscow Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water:

"Each of the Parties to this Treaty undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion at any place under its jurisdiction or control:

a) in the atmosphere; beyond its limits, including outer space; or underwater, including territorial waters or high seas ..."

International conventions which aim at an overall effect are exceptional; prohibitory rules usually concern distinct places (outer space, Antarctica, regions of the oceans). Very often the obligation they impose upon the contracting governments is not merely negative (not to do certain things contrary to the interests of the environment), but is often positive in that they must prohibit specific acts or activities at places under their jurisdiction or control-

Finally, absolute prohibition is imposed only in extreme cases (substances listed on "black lists" in conventions concerning the pollution of the seas). Usually, authorizations providing exemptions may be granted ("grey lists", lists of endangered species of wild fauna and flora). A very important element for the effectiveness of the prohibitory rule is the designation of which authority is entitled to grant the exemption. Unfortunately, in present circumstances the power to grant such exemptions from international rules usually still remains with national authorities. In the most favorable cases there is international supervision over the implementation of the international rules by national authorities, such as has been provided for in Article 17 of the Oslo Convention for the Prevention of Marine Pollution by Dumping (February 15, 1972). According to this provision, the Commission which is composed of representatives from each of the Contracting Parties shall receive and consider the records of permits and approvals issued by national authorities and of dumping which has taken place.

- 4. General supervision of the observation of the enforcement of international treaty rules may take various forms. Surveying carried out by the Contracting Parties themselves as to whether all other parties to the treaty are complying with their obligations is the most common method 146. Violation of such obligations involves international responsibility. In certain cases, however, improved supervisory methods have been established as international bodies receive and disseminate information on the enforcement of treaty rules. Article 11 of the 1973 London Convention for the Prevention of Pollution from Ships is particularly exhaustive on the various elements of information which must be given. According to this provision, the Parties undertake to communicate to the Intergovernmental Maritime Consultative Organisation:
 - "1... (a) the text of laws, orders, decrees and regulations and other instruments which have been promulgated on the various matters within the scope of the present Convention:
 - (b) a list of non-governmental agencies which are authorized to act on their behalf in matters relating to the design, construction and equipment of ships carrying harmful substances...

- (c) a sufficient number of specimens of their certificates issued under the provisions of the Regulation¹⁴⁷;
- (e) official reports or summaries of official reports in so far as they show the results of the application of the present Convention; and
- (f) an annual statistical report, in a form standardized by the Organisation, of penalties actually imposed for infringement of the present Convention.
- 2. The Organisation shall notify Parties of the receipt of any communications under the present Article and circulate to all Parties any information communicated to it under sub-paragraphs (1) (b) to (f) of the present Article".

Nevertheless, in most cases information is communicated not to existing international bodies but to organs specially created by the treaty itself.

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The most internationally advanced solution in matters of control by an international entity occurs when that body is entrusted with the power to draft and publish reports, declarations or documents concerning the state of the environment. This eventually implies criticism against national activities. (Agreement between Canada and the USA on Great Lakes Water Quality, Ottawa, April 15, 1972, Article VI). A welcome step further would be the granting to international organs of the authority to take the initiative in inquiring into national activities damaging the environment. However, it must not be forgotten that presently commissions established under environmental protection treaty rules are generally composed of Government representatives, which unfortunately limits the freedom of action they enjoy.

5. Sanctions are generally the weakest link in the enforcement of international law, this being the case even when there are international organizations to supervise the application of treaties. The State to which a violation is attributed has the responsibility to impose its own sanctions. Article 21 of the Draft European Convention for the Protection of international Watercourses against Pollution restates a general rule of international law in declaring:

"The provisions of this Convention shall not affect the rules applicable under general international law to any liability of States for damage caused by water pollution".

Apart from State responsibility, the system of sanctions is also internally incumbant upon the States. For example, according to most international provisions concerning environmental protection, the States themselves must prescribe sanctions for the violation of a treaty. Again, the 1973 London Convention for the Prevention of Pollution from Ships may be quoted as an example. According to Article 4, any violation of the

requirements of the Convention shall be prohibited and sanctions shall be established therefor *under the law of the Contracting Parties*. Moreover, it is specified that the penalties pursuant to the Conventon shall be adequate in severity to discourage violations of the Convention and shall be equally severe irrespective of where the violations occur.

There may even be controls on the legislation imposing the sanctions. For example, Article 12 of the Paris Convention of June 4, 1974 for the Prevention of Marine Pollution from Land-Based Sources provides that the Contracting Parties shall inform the Commission established under the Convention of the legislative and administrative measures they have taken in adopting appropriate measures to prevent and punish conduct in contravention of the provisions of the Convention. Similarly, the 1973 London Convention provides for compulsory communication to the IMCO of an annual statistical report of penalties imposed for infringement of the Convention.

6. Finally, a particularly important feature of international regulation for the protection of the environment is the part played by international commissions. They are established to supervise the implementation of treaties, to draft new or more detailed rules, to generally manage treaties and, last but not least, to organize cooperation in different fields (research, monitoring, exchange of information, common actions, etc.). There are about forty instruments entrusting international bodies with tasks in the field of the protection of the environment. This may indeed be proof that international regulation alone is insufficient to safeguard the environment. Beyond mere regulation, constant and institutionalized inter-governmental cooperation is a vital necessity in international attempts to protect the environment.

CHAPTER VI

THE PRINCIPLE OF INTERNATIONAL COOPERATION

PRINCIPLES

In the introduction of this work it had been proposed that international cooperation seems the best adapted means to prevent a general degradation of our biosphere. The 1972 Stockholm Conference on the Human Environment fully recognized the need for such cooperation. The preamble of the Declaration adopted at Stockholm proclaimed that a growing class of environmental problems will require extensive cooperation among nations, and action by international organizations, to achieve the common interest. According to Principle 24, international matters concerning the protection and improvement of the environment should be handled in a cooperative spirit by all nations, and on an equal footing. Cooperation is deemed essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres. Principle 25 adds that States shall ensure that international organizations play a coordinated, efficient and dynamic role for the protection and improvement of the environment, Similarly, Resolution 3129 (XXVIII) adopted by the UN General Assembly on December 13, 1973, as well as numerous declarations, resolutions and other texts adopted by various international organizations and conferences, re-affirmed the need for continuous international collaboration. One of the most recent of these, the 2nd Part of the Final Act adopted in Helsinki by the Conference on Security and Cooperation in Europe on August 1, 1975, could have a special importance due to its political background 148.

Investigation into general international law has shown that existing common law rules are not sufficient to ensure the protection of the environment with any efficiency. It has been stressed how significant it was that the arbitrators in the Trail Smelter Arbitration, the only international litigation concerning international liability for transfrontier environmental injury, came to the conclusion that regulations must be enacted for the future and that the States concerned must cooperate in the future by jointly conducting any investigations which might be undertaken in connnection with the matters dealt with in the award 149.

The review of existing international regulations concerning the protection of the environment led to a similar conclusion. It is significant that out of some 200 international instruments which include provisions tending to protect or the effect of which is to protect one or more aspects of the environment, a very high proportion, more than forty, entrust international bodies with particular tasks in this field.

Some other considerations may be added. Activities aimed at the protection of the environment require a minimum of continuity. Supervision has a fundamental importance in environmental matters; the examples of national legislative measures which remained practically inoperable due to the lack of

sufficiently rigorous supervision of their application confirms this proposition. Moreover, the norms concerning the protection of the environment require constant adaptation. Production and consumption, activities which are at the basis of all dangers to the environment, are in constant evolution both quantitatively and qualitatively. Thus, new dangers may potentially develop at any moment. In addition, our understanding of the environment is also growing and present day knowledge may be quickly outmoded. One only need think of production methods in agriculture or of the use of certain products or pesticides such as D.D.T., which were once advocated by governments as well as by international bodies, and later had to be abandoned because of the dangers they presented to the environment. Similarly, much pollution control legislation in several nations, written more than 10-15 years ago, had to be seriously amended if not wholly replaced by new rules more in conformity with present knowledge and present necessities concerning the environment. Thus, norms, whether national or international, concerning the protection of the environment have to be able to adapt to changes in production, consumption and knowledge.

Continuity is thus an indispensable element in any action at international level. The mere adoption of protective regulations is insufficient as constant cooperation is necessary to ensure the permanent implementation and adaptation of rules. The instruments of this permanent cooperation must necessarily be intergovernmental organizations, be they bilateral or multilateral, with a permanent character. As a matter of fact, since the 1960's an increasing number of existing intergovernmental organs and agencies have become involved in environmental issues at world-wide as well as at regional levels. In addition, quite a number of new organizations have been created in order to implement treaty provisions related to the protection of the environment. An extensive independent study would be necessary to review the nature and activities of all these groups. However, here, only two points of international institutional cooperation will be raised in a very schematic way: the functions of international organs and coordination between them in the field of the protection of the environment.

THE FUNCTIONS OF INTERNATIONAL ORGANS IN THE FIELD OF THE PROTECTION OF THE ENVIRONMENT

These functions were divided at the Stockholm Conference into three categories:

1) environmental assessment, which includes evaluation and review, research, monitoring and information exchange, 2) environmental management, which covers functions designed to facilitate comprehensive planning, and finally 3) supporting measures which relate to education, training and public information, organizational arrangement and financial and other forms of assistance.

It is clearly impossible to enumerate here all the tasks accomplished by the various international organizations, whether or not expressely provided for in the Stockholm Action Plan adopted at the same time as the Declaration of Principles. Some of the major branches of activities may, nevertheless, be recalled.

- 1) Research is particularly important in the present phase of our knowledge of the biosphere. Generally it concerns either the original state of the environment and the impact of human activities upon it, like the Man and Biosphere (MAB) programme of UNESCO, or pollution and the depletion of natural resources. Study programmes on the phenomenon of pollution itself are very numerous at the international level, one may recall the various programmes of FAO, WMO, WHO, as well as those of regional organization like OECD, NATO, and the UN Economic Commission for Europe. Research may also be jointly carried out by two or more organizations. For example, the scientific aspects of marine pollution have been studied as a preliminary to the drafting of international regulations by a group of scientists established by IMCO, UNESCO, FAO, WHO, and IAEA (Joint Group of Experts on the Scientific Aspects of Marine Pollution). Studies may entail research on perhaps remote issues, like the problem of depletion of the ozone layer, or may be focussed on very concrete ones, such as the research project on non-polluting vehicles initiated by the Committee on the Challenges of Modern Society of NATO. Research may be organized in different manners. In some cases, national or local programmes are coordinated, as in the study of the NATO Committee on the Challenges of Modern Society on Air Pollution in three cities (St. Louis, Frankfurt, and Ankara). In others, as in the framework of the Agreement on the Implementation of a European Project on Pollution on the topic "Sewage Sludge Processing" (Brussels, November 23, 1971), there is common financing of the research work and contracts are concluded with public research establishments or with private undertakings 150.
- 2) Exchange of information concerning national projects and, in some cases, results of national research programmes, is one of the most important aspects of cooperation in the framework of international organizations. Generally such exchange is encouraged and quite often international organs not only disseminate but also synthesize received information. All the international bodies concerned with environmental protection have some degree of involvement in these activities.
- 3) Regulatory functions are also sometimes exercised by international organs. They consist either in drafting new rules or in amending existing ones in order to adapt them to changed circumstances. The legal nature of the rules drafted by international organs may vary greatly. Usually, these organs have only a power of recommendation (UN specialized agencies in general, OECD, Council of Europe, the Antarctic Treaty Consultative Meetings resulting from Article IX of the 1959 Washington Treaty, etc.), but in some others they may have a more binding nature. An example of the latter is the Baltic Sea Fishery Commission, established under Article V of the 1973 Gdansk Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts, which can adopt recommendations to which effect must be given by the States which have not objected them. The Commission for the Conservation of Shrimp in the Eastern Gulf of Mexico, created by Article II of the Havana Convention between Cuba and the USA, of August 15, 1958, can even adopt regulations which will become effective 60 days following

notification to the Contracting Governments unless a prior objection had been lodged with the Commission. Other examples on the same line could also be quoted.

In some very rare cases international organs are entrusted with the power to adopt directly binding regulations (European Communities). The working methods of several organizations include the drafting of conventions which are then submitted to the Member States for signature and ratification or approval. An example of this may be seen in the European Agreement on the Restriction of the Use of Certain Detergents in Washing and Cleaning Products of September 16, 1968, drafted by the Council of Europe, which also prepared the text of the European Draft Convention on the Protection of International Watercourses against Pollution.

- 4) Supervision of the application of common rules is another function international organs sometimes are entrusted with. The most common method is for Member States to address reports on the implementation of international rules to the competent organs (Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, Oslo, February 15, 1972, Articles 11 and 17(b); Convention on the Prevention of Marine Pollution from Land-Based Sources, Paris, June 4, 1974, Article 12).
- organization seems to be the most advanced form of international cooperation in the field of the protection of the environment. As such, it is not frequently provided for in international instruments. Yet some conventions relating to wild fauna may be quoted in example, like the Interim Convention on Conservation of North Pacific Fur Seals, signed in Washington on February 9, 1957, as amended in 1963, according to which the Commission it creates recommends appropriate conservation measures to the Parties and determines from time to time the number of seals to be marked on the rookery islands as the total number of seals which shall be taken (Article V).

THE COORDINATION OF ACTIVITIES OF INTERNATIONAL ORGANIZATIONS

International organizations which are created to deal with environmental issues (or which consider themselves as such), are very numerous. As has been mentioned above, there are roughly 40 international treaties concerning environmental protection which entrust intergovernmental organs with particular tasks in this field. Of these treaties, about 20 provide for international commissions concerned with the control of the pollution of rivers and lakes, 5 are concerned with marine pollution and 15 with the protection of wildlife. Moreover, as most human activities have environmentally deleterious aspects, a number of existing intergovernmental organizations entrusted with a large scope of activities beyond environmental protection have become concerned with environmental issues and have sometimes created specialized commissions or committees to deal with such problems.

Under these circumstances, the creation of an international body, UNEP, by the General Assembly of the United Nations in late 1972 (Resolution 2997(XXVIII)), as an organ entrusted *inter alia* with the task of coordinating the activities of the others, was of elementary necessity. Still, it remains an open issue as to the basis employed to distribute the different functions among the various bodies concerned. Three different approaches are possible according to the very nature of the particular task which must be faced: the geographic area to be covered by the necessary measures, the concern of the different international organs, and, finally, the working methods they use.

 When adopting general norms concerning the duties and rights of States or international responsibilities, or when the scale of a particular environmental problem is clearly a world-wide one (ozone depletion, long-distance pollution, trade in endangered species of fauna and flora), cooperation must be international. Hence, world-wide organizations will constitute the best framework to deal with these issues.

Regional organizations appear to be the best adapted framework for eliminating and controlling damage caused to the environment by the usual forms of pollution or by the depletion of natural resources. These organizations appear sufficiently large to enable the problem to be dealt with on a rather high level (common research, elimination of effects resulting from anti-pollution measures on economic competition, and unification of legislation, while at the same time responding to the requirements of homogeneity in economic, social and even political structures.

Cooperation between a more restricted number of States in the framework of an international commission seems to be the best device to solve geographically localized problems (pollution of a particular river or lake, or of a given part of the oceans, air pollution in a more restricted area, etc.). However, principles and criteria used by international bodies with limited membership must be as far as possible the same. This problem was clearly perceived by the authors of the European Draft Convention for the Protection of International Watercourses against pollution who proposed a uniform pattern for the creation and the functions of international river commissions.

The concerns of particular intergovernmental organizations may be another criteria for their participation in the fight for environmental protection. In most cases such organizations are clearly entrusted with functions related to the field; there is certainly no doubt about the functions of commissions specially created for concrete tasks by treaty provisions concerned with the protection of specific aspects of the environment. The competence of particular specialized agencies (WMO, WHO, IMCO, etc.) is, on the whole, also clearly established, even if duplication is not necessarily excluded. Problems of coordination may arise most commonly in organizations entrusted with a very large scope of attributions, whether at a world-wide level, (FAO, UNESCO), or at a regional one (European Communities, OECD, Council of Europe, NATO, UN-ECE, CMEA). However, differences in the composition of these organizations may be great enough to eliminate duplication.

3. Even when such duplication does seem to exist, differences in the powers and the working methods of the various organizations which are concerned may practically eliminate the problem. This may be seen in the experiences of European organizations which, although they are engaged in the same field, as in water or air pollution control, may have different approaches which allows them to avoid duplication. The principal danger of two or more organizations doing the same work arises at the stage of preliminary studies. Generally, the final form of action varies from one organization to the other, as may be seen in the work of European conventions or recommendations imposing fundamental principles for the Council of Europe, recommendations or decisions involving rather technical points for OECD, concrete devices in the field of environmental research for NATO, and detailed and mandatory rules for the European Communities.

Still, for the sake of efficiency, a better coordination of the activities of various international organizations concerned with the protection of the environment seems necessary. Indeed, such efficiency is needed, to foster favorable public opinion, without which the protection of the environment can hardly be imagined.

NOTES

CHAPTER I

INTRODUCTION

- 1 A. Kiss-J.-D. Sicault, "La Conférence des Nations unies sur l'environnement", *Annuaire français de droit international*, 1972, p. 623.
- See also the report of UNEP's Governing Council on its 3rd session (Nairobi, April 17 May 2, 1975) and particularly the discussion concerning the relationship between environment and development and the concepts of outer limits and eco-development (UNEP/GC/55, paragraphs 169-171).
- 3 See on this particular point the Resolution adopted on April 18, 1972 by the European Parliament (Official Journal of the European Communities, no. C 46/13, 9/5/1972; as well as GATT Documents no. L 3538 and 3622 rev. 1; UN Economic Commission for Europe, document E/ECE/AIR POLL/4 and 9 annex and the Recommendation adopted by the Council of OECD on May 26, 1972 (Document C (72) 128) on guiding principles concerning international economic aspects of environmental policies.

CHAPTER II

- 4 G.M. Bl. 1971, p. 114
- 5 ILM 1972, p.761
- 6 ILM 1974, p. 598
- June 4 and July 1, 1974, EEC/SEC (74) 2518 final and Rüster-Simma, International Protection of the Environment, Oceana, 1975, vol. I, p. 80
- 8 Official Journal of the European Communities, no. C 112/5, 20/12/73. See also on the problem whether the EEC is empowered to act in environmental matters: A. Gérard, "Les limites et les moyens juridiques de l'intervention des Communauté européennes en matière de protection de l'environnement," Cahiers de droit européen, 1975, pp. 14-30.
- 9 Official Journal of the European Communities, no. L 42 23/2/1970.
- 10 Official Journal of the European Communities, no. L 72, 6/4/1970 and L 190, 20/8/72.
- 11 Directives concerning
 - the harmonization of the legislation of Member States concerning detergents (November 22; OJEC, no. L 347, 17.12.1973);

- the adaptation of the 1970 directive concerning air pollution by gases emitted by positive-ignition engines of motor vehicles to progress in the relevant technology (May 28, 1974; OJEC, no. L. 159/61, 15.6.1974);
- the quality required of surface water intended for the abstraction of drinking water in the Member States (June 16, 1975; OJEC, no. L 194/26, 25.7.1975);
- the disposal of waste oils (June 16, 1975; OJEC, no. L 195/23, 25.7.1975);
- waste (July 15, 1975; OJEC, no. L 194/39, 25.7.1975).

12 Decisions

- concluding the Convention for the Prevention of Marine Pollution from Land-Based Sources (March 3, 1975; OJEC, no. L 194/5, 25.7.1975);
- setting up a Regional Policy Committee (March 18, 1975; OJEC, no. L 74/47, 21.3.1975);
- establishing a common procedure for the exchange of information between the surveillance and monitoring networks based on data relating to atmospheric pollution caused by certain compounds and suspended particulates, June 24, 1975, OJEC, no. L 194/32, 25.7.1975);
- adopting a programme on the management and storage of radioactive waste, June 26, 1975, OJEC, no. L 178/28, 9.7.1975);
- amending former decisions adopting research programmes for the EEC in different fields (teledetection of earth resources, use of solar energy and recycling of raw materials, pollution and nuisances, etc.) (four decisions of August 15, 1975, OJEC, no. L 231/17-20 and 25-28, 2.9.1975).

13 Resolutions

- on energy and the environment (March 3, 1975, OJEC, no. C 168/2, 25.7.1975);
- Concerning a revised list of second-category pollutants to be studied as part of the programme of action of the European Communities on the environment (June 24, 1975; OJEC, no. C 168/4, 25.7.1975);
- extending the powers of the Advisory Committee on Programme Management for "Treatment and storage of radioactive waste" (direct action) and "Management and storage of radioactive waste" (indirect action), (June 26, 1975, OJEC no. C 153/10, 9.7.1975);
- on the adaptation to technical progress of Directives or other Community rules on the protection and improvement of the environment (July 15, 1975, OJEC, no. C 168/5, 25. 7. 1975).

- 14 Recommendation regarding cost allocation and action by public authorities on environmental matters (March 3, 1975, OJEC, no. L 194/1, 25.7.1975).
- 15 The Programme of Action of the European Communities on the Environment has been itself adopted as a "Declaration of the Council of the European Communities and of the representatives of the Governments of the Member States meeting in the Council, of November 22, 1973" (OJEC no. C 112/1, 20.12.1973).
- 16 An agreement has been adopted by representatives of the governments of the Member States meeting in the Council of March 5, 1973 on the information of the Commission and other member States of national measures tending to protect or to improve the environment, (OJEC, no. C 9/1, 15.3.1973). It has been officially stated that this agreement had to be considered as a gentlemen's agreement.
- 17 Gee, on "soft law" in general, R.J. Dupuy, *Droit déclaratoire et droit programmatoire: de la coutume sauvage* à *la soft law, Société française pour le droit international, L'élaboration du droit international public.* Paris, 1975, p.132.
- 18 E.g. the Recommendation of the EEC Council regarding cost allocation and action by public authorities on environmental matters (March 3, 1975, OJEC, no. L 194/1, 25.7.1975).
- 19 See, e.g. Recommendation 102 which recommends that the appropriate regional organizations give full consideration to the steps proposed by the text of the resolution.
- 20 OJEC, no. C 112, 20.12.1973.
- 21 The European Convention on the Protection of International Watercourses Against Pollution will also concern, when it is signed and ratified, the water of the Rhine. (Council of Europe, Exp./Eau (74) 6 add. I).
- 22 OJEC, no. C 112/26-28, 20.12.1973.
- 23 November 22, 1973, OJEC, no. C 112/1, 20.12.1973.
- 24 E.g. Resolution 2995 (XXVII) concerning the cooperation between States in the field of the environment, adopted on January 19, 1973.
- 25 Resolution 3281 (XXIX).
- 26 OJEC, no. C 112, 20.12.1973.
- 27 Resolution (68)4 adopted by the Committee of Ministers on March 8, 1968.
- 28 Proclaimed on May 8, 1968.
- 29 Resolution (72)19 of May 30, 1972.

- 30 G. Scelle, "Cours de droit international public," 1946-1947, Les Cours de Droit, Paris, pp. 10-11.
- 31 See for the texts concerning the international protection of human rights: L.B. Sohn and Th. Buergenthal, *Basic Documents on International Protection of Human Rights*, The Bobbs-Merril Co.1973.
- 32 C (74) 224.

CHAPTER III

- 33 Universal Declaration of Human Rights, December 10, 1948, Art. 1 and 2, and see Note 31 at p. 30; "International Convention on Civil and Political Rights," December 16, 1966, Art. 2 par. 1 and 3, id, p. 45.
- 34 International Law Association, Report of the 55th Conference, New York, 1972, p. 77-79.
- 35 In the Corfu Channel Case (merits), the International Court of Justice emphasizes the obligations incumbent upon the Albanian authorities to notify 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, according to the ICJ on "certain general and well-recognized principles, namely: elementary considerations of humanity.... and every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States". (ICJ Reports. 1949, p. 22).
- 36 Document A/Conf. 48/4 Rev I., principle 20
- 37 Res/2995(XXVII)
- 38 Res/3139(XXVIII)
- 39 UNEP/GC/L 24, March 25, 1974.
- 40 ILM, 1973, p. 1325. See also Protocol I annexed to the Convention relating to reports on incidents involving harmful substances p. 1439.
- 41 Art. VI, par. 3. See also the Recommendation C 6 concerning radioactive waste issued by the International Atomic Energy Agency adopted on September 13, 1974 (IAEA, Document INFCIRC/205/Add.1).
- 42 O.J., no. c 9/2 of 15.3.1973.
- 43 Activities of OECD in 1972, Report by the Secretary General, Paris, 1973, pp. 59-60.
- 44 Activities of OECD in 1973, Report by the Secretary General, Paris 1974, pp. 55-56.

- 45 Resolution (71) 5.
- 46 See note 32.
- 47 Decision of May 30, 1969, Stadt Freilassing and Max Aicher, Oesterreichische Juristenzeitung, 1970, p. 305; Journal du droit international, 1972, p. 647.
- 48 I. Seidl-Hohenveldern, "A propos des nuisances dues aux aéroports limitrophes: le cas de Salzbourg et le traité austro-allemand du 19 décembre 1967," Annuaire français de droit international, 1973, p. 890.
- 49 Council of Europe, Document EXP/Air (73)2 of October 26, 1973, Procedures for consultation at national and international levels prior to the setting up of polluting plants in border areas.
- 50 See note 32.
- 51 See a report presented to the 9th Conference of European Ministers of Justice (30-31 May 1974) by C. Broda, Austrian Minister of Justice: "Obstacles économiques et autres d'accès à la justice civile, notamment à l'étranger", Council of Europe, Document CDJ (74)3.
- 52 The Recommendation of the OECD Council on principles concerning transfrontier pollution of November 14, 1974, declares that "whenever transfrontier pollution gives rise to damage in a country, those who are affected by such pollution should have the same rights of standing in judicial or administrative proceedings in the country where such pollution originates as those of that country, and they should be extended procedural rights equivalent to the rights extended to those of that country".
- 53 May 12, 1975, Handelskwekering Bier v. Mines de Potasse d'Alsace. See the article by Steven van Hoogstraaten in Environmental Policy and Law, vol. 1, no. 2, p. 73.
- 54 ILM, 1970, pp. 56-57.
- 55 October 22, 1957, Neue Juristische Wochenschrift, 1958, p. 752; Die Deutsche Rechtssprechung auf dem Gebiete des internationalen Privatrechts, 1956-1957, p. 151.
- 56 These problems were examined in detail in our report on "Problèmes juridiques de la pollution de l'air" to The Hague Academy of International Law Colloquium on the Protection of the Environment and International Law, Recueil des Cours de l'Académie du droit international, Colloquium, 1973, pp. 165-169. See also A. Ch. Kiss, "Los principios generales del derecho del medio ambiente," Universidad de Valladolid, 1975, pp. 62-66.
- 57 ICJ Reports, 1973, p. 106.

- 58 The text of the two awards handed down in this case on April 16, 1938 and March 11, 1941 are found in the UN Reports of International Arbitral Awards, Vol. III, pp. 1965-1982. It should be noted that the compromise signed at Ottawa on April 15, 1935 raised expressly the question of whether, if the Trail Smelter caused damage, it "should be required to refrain from causing damage in the State of Washington in the future and, if so, to what extent" (op. cit., p. 1908).
- 59 id at pp. 1931 seq.

CHAPTER IV

- 60 Corfu Channel Case (Merits), ICJ Reports, 1949, p. 22.
- 61 A. Ch. Kiss, L'abus de droit en droit international, Paris 1953, pp. 19-24, 35-36 and 61-63. See also: G. Handl, "Territorial Sovereignty and the Problem of Transnational Pollution," American Journal of International Law, 1975, p. 55.
- 62 OJEC, no. C 112/6, of 20.12.1973.
- 63 See above, p.
- 64 UNEP/GC/L 24. One may also recall here Art. 51 of the Treaty of the La Plata River and its Maritime Limits, signed in Montevideo on November 19, 1973 by Argentina and Uruguay:
 - "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". ILM, 1974, p. 260.
- 65 April 16, 1938 and March 11, 1941, UN Reports of International Arbitral Awards, III, p. 1907.
- 66 US Treaty Series, no. 548, AJIL, 1910, suppl. p. 239.
- 67 See note 58 at p. 1965.
- 68 According to L.F.E. Goldie "the value of *Trail Smelter* derives, from the point of view of the present discussion, not so much from the *compromis* or the Tribunal's 1938 opinion, as from the regime established for monitoring and governing the emission of sulphur dioxide fumes. This aspect of the case reflects a clear vision of the parties' international rights and obligations for negligent failures of the smelter works in emitting the nuisance-creating effluents". "A General View of International Environmental Law," *The Hague Academy of International Law, Colloquium 1973*, p. 71.
- 69 November 19, 1956, UN Reports on Arbitral Awards, vol. XII, pp. 285 and 303.
- 70 G. Gaja, "River Pollution in International Law," The Hague Academy of International Law, Colloquium 1973, p. 359-360.

- 71 "Any High Contracting Party may refer to the Commission any alleged breach of the provisions of the Convention by another High Contracting Party".
- 72 This was the opinion of the rapporteurs at the Colloquium of The Hague Academy of International Law, on the Protection of the Environment and International Law held in 1973. Cf. *Recueil des Cours, Colloquium 1973,* Note 68 at p. 98, 103-109; *id* J.-Y. Morin, pp. 336-337, 518; Note 70 at p. 570
- 73 "1. Any Member of the UN may bring any dispute, or any situation of the nature referred to in Art. 34, to the attention of the Security Council or of the General Assembly".
- 74 January 27, 1967, IEL/MA, 967:07.
- 75 ILM, 1972, p. 893.
- 76 Le Monde, March 20 and 27, 1975.
- 77 C.A. Fletscher, "Pollution from Seaborne Sources", New Directions in the Law of the Sea, Collected Papers, vol. III, London, 1973, p. 95.
- 78 L.F.E., Goldie, "Development of an International Environmental Law, an Appraisal", in *Law, Institutions and the Global Environment*, Oceana, 1972, p. 135.
- 79 See Note 77 at p. 89.
- 80 id p. 97; See Note 78 at pp. 136 137.
- 81 See Note 68 at p. 85-86.
- 82 "Volkenrechtelijke aspecten van de waterverontreininging," *Mededelingen van de Nederlandse Vereniging voor international recht*, no. 65, p. 32.
- 83 ILM, 1974, p.1409 and 1975, p. 147.
- See Note 68 at p. 69, and Law, Institutions and the Global Environment, p. 105; Randelzhofer-Simma, "Das Kernkraftwerk an der Grenze," Festschrift für Friedrich Berber, p.389 s.; P. Dupuy, "La responsabilité internationale des Etats pour les dommages causés par les activités technologiques et industrielles," thèse, Paris 1974, mimeographed, pp. 271-474; 524-656, etc.
- 85 See Note 84 Dupuy, at p.658.
- 86 See Note 61: Handl, at p. 75.

CHAPTER V

- 87 OJEC, no. C 112/6, 20. 12. 1973.
- 88 ILM, 1975, p. 1307.
- 89 Resolution (68)4.
- 90 UNEP/GC/55, pp. 120-121.
- 91 ILM, 1972, p. 893.
- 92 See Note 77 at p.89.
- 93 J.P. Queneudec, "Les incidences de l'affaire du Torrey Canyon sur le droit de la mer", AFDI, 1968, pp. 701 et seq.
- 94 See above, p. 53.
- 95 See Note 77 at p. 90.
- 96 See on this Convention, Note 68 at pp. 44-50, and J.P. Quéneudec, "Chronique du droit de la mer," AFDI, 1969, pp. 747-758.
- 97 ILM, 1970, p. 65.
- 98 ILM, 1974, p. 480 and 605.
- 99 I.L.M., 1975, p. 482 and Press Release UNEP/86 and 87.
- 100 See above, p. 63.
- 101 See Note 99.
- 102 Art. 7 of the Draft Convention, ILM, 1975, p. 483.
- 103 See Note 77 at p. 99, Note 72 at pp. 248-251.
- 104 Resolution 3129 (XXVIII). Resolution 44(III) adopted by UNEP's Governing Council on April 25, 1975, charges an intergovernmental working group to draft guiding principles on the basis of the Resolution of the UN General Assembly.
- 105 Council of Europe, Document 3417. See also on the Draft Convention the Articles of E. Diez and H. Golsong, in *Naturopa*, no. 20, pp. 2 and 4.
- 106 Directive of November 22, 1973, OJEC, no. L 347/51, 17.12.1973.
- 107 Directive of November 22, 1973, OJEC, no. L 347/53, 17.12.1973.
- 108 Directive of June 16, 1975, OJEC, no. L 194/26, 25.7.1975.

- 109 See Note 70 at pp. 379 ss.
- 110 See Note 7 at 381-387; A. Ch. Kiss C. Lambrechts, "La lutte contre la pollution de l'eau en Europ ,ccidentale," AFDI, 1969, pp. 724-736.
- 111 See, for example, the Agreement concerning the International Commission for the Protection of the Rhine against Pollution, concluded in Bern, on April 29, 1963, Article 2,1, and the Convention between France and Switzerland concerning the protection of Lake Leman against pollution, Article 3 a), etc.
- 112 See on this agreement: R. B. Bilder "Controlling Great Lakes Pollution," in Law, Institutions and the Global Environment, New York, 1972, pp. 294-380; and A. Ch. Kiss C. Lambrechts, "L'Accord entre les Etats-Unis et le Canada relatif à la qualité des eaux dans les Grand Lacs," AFDI, 1974, pp. 797-807.
- 113 See on this agreement: H. Brownell S.D. Eaton, "The Colorado River Salinity Problem with Mexico," AJIL, 1975, pp. 255-271.
- 114 See on the activities of this Commission: M. Wolfram, "La pollution des eaux du Rhin," AFDI, 1964, pp. 737 ss.; R. Pedroli, "Transfrontier Problems of Freshwater Conservation especially in the Rhine and Lake Geneva," Naturopa, 1974, no. 20, pp. 7-10; A. Ch. Kiss, "La protection de l'environnement et les organisations européennes," AFDI, 1973, p. 913.
- 115 Resoluton (68) 4.
- 116 UN Treaty Series, vol. 335, p. 211. The two Regulations here quoted have been published in the series of Documents E/ECE/324-E/ECE/TRANS/505, no. 9 as Add. 8/Rev. 1, no, 15 as Rev. 1, Add. 14.
- 117 OJEC, no. L 42, 23.2.1970.
- 118 Directive of March 2, OJEC, no sL 76/1, 6.4.1970. Another directive, of May 28, 1974, adapts this text to technical progress, OJEC, no. L 159/61, 15.6.1974.
- 119 Regulation no. 24, also annexed to the Agreement of March 20, 1958.
- 120 Directive of August 2, 1972, OJEC, no. L 190/1, 20.8.1972.
- 121 Resolution 510 (1972).
- 122 E/ECE/AIR POLL/4, Annex I, p. 2, See also, on the control of sulphur dioxide emissions into the air: Resolution (70) 12 adopted by the Committee of Ministers of the Council of Europe on March 7, 1970.
- 123 Resolution (68) 4.
- 124 Resolution (70) 11 adopted on March 7, 1970.

125 Document E/ECE/AIR POLL/4.

126 Document 181/71, annex, section 16.

127 June 24, 1975, OJEC, no. L 194/32, 25.7.1975.

128 See also, p. 45 et seq.

129 "Umweltschutz", no. 15, pp. 18-19.

130 e.g. the International Plant Protection Convention signed in Rome on December 12, 1951, IEL/MA, no. 951:90.

131 e.g. the Convention placing the International Poplar Commission within the framework of the FAO, adopted in Rome on November 19, 1959, IEL/MA, no. 959:86.

132 Convention on the African Migratory Locust, adopted at Kano, on May 25, 1962, IEL/MA, no. 962:39.

133 See M.J. Savini, "Report on International and National Legislation for the Conservation of Marine Mammals", Part. 1, FAO Fisheries Circular no. 326, FIRD/C 326, pp. 48-54.

134 id at p.25.

136 Resolutions (67)24 adopted on October 27, 1967 and (73)31 of October 26, 1973.

137 See Note 133 at p. 64.

138 id at p. 62.

139 Both treaties can be considered as a result of the arbitration between Great Britain and USA in the case of the fur seals of the Bering Sea. The arbitrators had been charged to draft a regulation concerning seal hunting in that area. The decision, of August 15, 1893, prohibits the killing or capture of fur seals in an area 60 miles around the Pribilof Islands and for the rest prohibits the use of guns, nets and explosives as well as that of boats other than sailing boats, and finally establishes a closed period for hunting (Moore, Digest of International Arbitrations, vol. I, p. 755 and see also, Ph. C. Jessup, "L'exploitation des richesses de la mer," Recueil des cours de l'Académie de droit international, vol. 29, pp. 460-469, and Revue générale de droit international public, 1894, pp. 32-43 (de Martens) et 44-51 (L. Renault).

140 See Note 133 at p. 54.

141 See above, p. 88 et seg.

142 See on the activities of the International Whaling Commission Note 133 at p.6.

143 id at p.25.

144 See above p. 64 et seq.

145 See above pp.101 et seq.

- 146 See for a very interesting example of such supervision, Article I of the 1911 Washington Treaty between Great Britain, Japan, USSR, USA reported above, p. 98.
- 147 e.g. International Oil Pollution Prevention Certificates (Regulation 5 of Annex I) or International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (Regulation 11 of Annex II).

CHAPTER VI

148 In this Declaration the participating States affirm that "many environmental problems, particularly in Europe, can be solved effectively only through close international cooperation" (ILM, 1975, p. 1307).

149 See above, p. 46.

150 ILM, 1973, p.9.

TABLE OF TREATIES*

30.6.1885	Convention Concerning the Regulation of Salmon Fishing in the Rhine River Basin, Berlin (Germany, Luxembourg, Netherlands, Switzerland); IEL/MA, no. 885:48/1.	92, 99, 96, 101
19.3.1902	Treaty for the Protection of Birds Useful to Agriculture, Paris (Austria, Belgium, Czechoslovakia, France, Germany, Hungary, Liechtenstein, Luxembourg, Monaco, Netherlands, Portugal, Spain, Switzerland); IEL/MA, no. 902:22/1.	82, 91, 93, 95, 96, 100, 103
11.1.1909	Treaty Between the USA and Great Britain Respecting Boundary Waters Between the USA and Canada, Washington; AJIL, 1910, suppl., p. 239.	73, 75
7.2.1911	Treaty Between Great Britain and the USA for the Preservation and Protection of Fur Seals, Washington; de Martens-Triepel, 3e série, tome V, p. 717.	92, 97, 98
7.7.1911	Convention for the Preservation and Protection of Fur Seals in the North Pacific (Great Britain, Japan, Russia, USA); de Martens-Triepel, 3e série, tome V, p. 720.	92, 97, 98, 126
16.8.1916	Convention Between the USA and Great Britain for the Protection of Migratory Birds, Washington; IUCN/CL.	91, 93, 95, 96, 100
9.2.1920	Treaty Regulating the Status of Spitsbergen and Conferring the Sovereignty on Norway, Paris (38 States including Denmark, France, Japan, Norway, Sweden, USSR, the United Kingdom and USA); IEL/MA, no. 920:11/1.	80, 90
10.4.1922	Agreement Between Denmark and Germany Relating to Watercourses and Dikes on the German Danish Frontier, Copenhagen; de Martens-Triepel, 3e série, tome XV, p. 151.	75, 76
7.11.1929	Agreement Between Belgium and Germany Concerning the Common Border, Aachen; Reichsgesetzblatt, 1939, part II, p. 146.	75
26.5.1930	Convention Between the USA and Canada Concerning Sockeye Salmon Fisheries, Washington; TIAS, No. 918.	92

24.9.1931	Convention for the Regulation of Whaling, Geneva (45 States signed this treaty, 24 are Parties to it, including Canada, Denmark, France, Netherlands, Norway, the UK and USA, but neither Japan nor the USSR); IEL/MA, no. 931:71/1.	92
8.11.1933	Convention Relative to the Preservation of Fauna and Flora in Their Natural State, London (Belgium, India, Italy, Portugal, South Africa, Spain, Sudan, Tanzania, UK); IEL/MA, no. 933:83/1.	83, 95, 99, 100, 101, 103
22.11.1934	Agreement Between Belgium and Great Britain Regarding Water Rights on the Boundary Between Tanganyika and Ruanda-Urundi, London; de Martens-Triepel, 3e série, tome XXXVI, p. 83.	73
7.2.1936	Convention Between the USA and Mexico for the Protection of Migratory Birds and Game Mammals, Mexico City; IUCN/CL.	91, 94, 95, 96, 98, 101
12.10.1940	Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere, Washington (Argentina, Brazil, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Nicaragua, Panama, Peru, Trinidad and Tobago, USA, Uruguay, Venezuela; three more States - Bolivia, Columbia and Cuba - only signed the Convention); IEL/MA, no. 940:76/1.	85, 100, 101
2.12.1946	International Convention for the Regulation of Whaling, Washington (Argentina, Australia, Canada, Denmark, France, Iceland, Japan, Mexico, Norway, Panama, South Africa, USSR, UK, USA) and Schedule drafted by the Commission established by the Convention; IEL/MA, no. 946:89/1 and 16.	92,94,95,97, 98, 101
8.7.1949	Agreement Between Poland and the USSR Concerning the Regime of the Soviet-Polish State Frontier, Moscow; UNTS, vol. 37, p.25.	73, 90
8.2.1949	International Convention for the Northwest Atlantic Fisheries, Washington (16 States including Canada, Denmark, France, Germany, Iceland, Japan, Norway, USSR, UK, USA); IEL/MA, no. 949:11.	97, 101
25.11.1949	Treaty Between the USSR and Rumania Concerning the Regime of the Soviet-Rumanian State Frontier, Moscow; UN-UIR, p. 919.	, 72

29.12.1949	Agreement Between Norway and the USSR Concerning the Regime of the Norwegian-Soviet Frontier, Oslo; UNTS, vol. 83, p. 343.	72, 90
24.2.1950	Treaty Between the USSR and Hungary Concerning the Regime of the Soviet-Hungarian State Frontier, Moscow; UN- UIR, p. 823.	72
8.4.1950	Protocol to Establish a Tripartite Standing Committee on Polluted Waters, Brussels (Belgium, France, Luxembourg); IEL/MA, no. 950:27.	75
18.10.1950	International Convention for the Protection of Birds, Paris (Belgium, Iceland, Luxembourg, Netherlands, Spain, Sweden, Switzerland, Turkey, Yugoslavia); IEL/MA, no. 950:77.	33, 91, 95, 96, 101
18.4.1951	Treaty Establishing the European Coal and Steel Community, Paris (Belgium, France, Germany, Italy, Luxembourg, Netherlands); IEL/MA, 951:75.	21
6.2.1952	Agreement Between Poland and the German Democratic Republic, Berlin; UNTS, vol. 304, p. 168.	73, 74
7.3.1952	Agreement Concerning Measures for the Protection of the Stocks of Deep-Sea Prawns, European Lobsters, Norway Lobsters, and Crabs, Oslo, amended by Protocol of 14.10.1959 (Denmark, Norway, Sweden); IEL/MA, nos. 952:18 and 959:76.	93, 102
12.5.1954	International Convention for the Prevention of Pollution of the Sea by Oil, amended on October 21, 1969, London (47 States, including Algeria, Australia, Belgium, Canada, Denmark, France, Germany, Italy, Japan, Kuwait, Liberia, Libya, Netherlands, Norway, Panama, Saudi Arabia, USSR, UK, USA, Venezuela, Yemen (Aden)); IEL/MA, no. 954:36 and 969:77.	59
16.12.1954	Agreement Between Austria and Yugoslavia Concerning Water Economy Questions in Respect of the Frontier Sector of the Mura and the Frontier Waters of the Mura, Vienna, IUCN/CL.	75, 76

7,4,1955	Agreement Between Rumania and Yugoslavia Concerning Questions of Water Control Systems and Watercourses on or Intersected by the State Frontier, Bucharest; UN- UIR, p. 928.	75
8.8.1955	Agreement Between Hungary and Yugoslavia Concerning the Regulation of Water Economy Questions, Belgrade; UN-UIR, p. 830.	75
9.4.1956	Treaty Between Austria and Hungary Concerning the Regulation of Water Economy Questions in the Frontier Region, Vienna; UNTS, vol. 438, p. 124.	73, 75
24.9.1956	Treaty Between Belgium and the Federal Republic of Germany Concerning the Regulation of Various Problems, Brussels; 'JN-UIR, p. 533; UNTS, vol. 314, p. 196.	74
27.10.1956	Convention on the Canalization of the Mosel, Luxembourg, (Federal Republic of Germany, France, Luxembourg); IEL/MA, no. 956:80.	74
30.11.1956	Agreement Between Czechoslovakia and USSR Concerning the Regime of the Frontier, Moscow; UNTS, vol. 266, p. 243.	73, 90
28.12.1956	Protocol Between the USA and Canada Amending the Convention of May 26, 1930 on Sockeye and Pink Salmon Fisheries, Ottawa; TIAS, 3867.	92
9.2.1957	Interim Convention on Conservation of North Pacific Fur Seals, Washington (Canada, Japan, USSR, USA); IEL/MA, no. 957:11	92, 102, 112
25.3.1957	Treaty Establishing the European Atomic Energy Community (Euratom) Rome, (Belgium, France, Fed. Rep. Germany, Italy, Luxembourg, Netherlands); IEL/MA, no. 957:23.	21 et seq.
25.5.1957	Agreement Between Hungary and Yugoslavia Concerning Fishing in Frontier Waters, Belgrade; UNTS, vol. 477, p. 219.	73
22.11.1957	Agreement Between Norway and USSR on Measures for Regulating the Catch and Conserving Stocks of Seals in the North-Eastern Part of the Atlantic Ocean, Oslo; UNTS, vol. 309, p. 280.	92, 94, 95, 96, 102

18.1.1958	Treaty Between Afghanistan and USSR Concerning the Regime of the Frontier, Moscow, UNTS, vol. 321, p. 77.	73, 90, 95
29.1.1958	Convention Concerning Fishing in the Waters of the Danube, Bucharest (Bulgaria, Rumania, USSR, Yugoslavia); UNTS vol. 339, p. 58.	74
20.3.1958	Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, Geneve (Austria, Belgium, Czechoslovakia, France, Fed. Rep. Germany, Hungary, Italy, Luxembourg, Netherlands, Spain, Sweden, Switzerland, UK, Yugoslavia); IEL/MA, no. 958:22.	78, 79
4.4.1958	Agreement Between Bulgaria and Yugoslavia Concerning Water Economy Questions, Sofia; UNTS, vol. 367, p.89.	75
29.4.1958	Convention on the High Sea, Geneva (53 States including Australia, Belgium, Denmark, Fed. Rep. Germany, Indonesia, Italy, Japan, Kenya, Mexico, Netherlands, Poland, Portugal, South Africa, Spain, USSR, UK, USA and Yugoslavia); UNTS, vol. 450, p. 82.	48,59
29.4.1958	Convention on the Continental Shelf, Geneva (52 States including Australia, Canada, China, Denmark, France, Kenya, Mexico, Netherlands, New Zealand, Nigeria, Norway, Poland, Portugal, South Africa, Spain, Sweden, USSR, UK, USA and Yugoslavia); UNTS, vol. 499, p. 311.	59
10.7.1958	Treaty Between Luxembourg and Land Rhineland-Palatinate Concerning the Construction of Hydroelectric Power Installations on the Our, Trier; UN-UIR, p. 727.	74
15.8.1958	Convention Between Cuba and the USA for the Conservation of Shrimp, Havana; UNTS, vol. 358, p. 63.	93, 102, 111
1.12.1959	The Antarctic Treaty, Washington (Argentina, Australia, Belgium, Chile, Czechoslovakia, Denmark, France, Japan, Netherlands, New Zealand, Norway, Poland, South Africa, USSR, UK, USA); UNTS vol. 402, p. 71.	49, 80, 86, 98, 102, 111

8.4.1960	Treaty Between Netherlands and the Federal Republic of Germany, Concerning the Course of the Common Frontier, the Boundary Waters, etc., The Hague; UNTS, vol. 508, p. 15.	19,73, 75
20.6.1960	Treaty Between Belgium and Netherlands concerning the Improvement of the Terneuzen and Ghent Canal, Brussels; UNTS vol. 423, p. 19.	75
23.6.1960	Agreement Between Finland and USSR Concerning the Regime of the Frontier, Helsinki; UNTS, vol. 379, p. 377.	73
29.7.1960	Convention on Third Party Liability in the Field of Nuclear Energy, Paris (Belgium, France, Spain, Sweden, Turkey, UK); IEL/MA, no. 960:57.	39, 52
19.9.1960	Indus Basin Development Fund Agreement, Karachi (Australia, Canada, Fed. Rep. Germany, International Bank for Reconstruction and Development, New Zealand, Pakistan, UK, USA); IEL/MA, no. 960:69.	74
27.10.1960	Agreement on the Protection of Lake Constance against Pollution, Steckborn (Austria, Baden-Württemberg, Baveria, Switzerland); IEL/MA, no. 960:80.	19, 34, 74, 75, 76
15.11.1960	Agreement Between Norway and Finland Regarding New Fishing Regulations of the Fishing Area of the Tana River, Oslo; UNTS vol. 383, p. 159.	74
15.2.1961	Treaty Between Poland and USSR Concerning the Regime of the Frontier, Moscow; UNTS, vol. 420, p.235.	74
7.4.1961	Treaty Between Argentina and Uruguay on the Boundary Constituted by the Uruguay River, Montevideo; UN-UIR, p. 164.	74
20.12.1961	Protocol Concerning the Constitution of an International Commission for the Protection of the Mosel Against Pollution, Paris (France, Fed. Rep. Germany, Luxembourg); IEL/MA, 961:94.	76

25.5.1962	International Convention on the Liability of Operators of Nuclear Ships, Brussels (Malagasy Republic, Portugal, Zaire); IEL/MA, no. 962:40.	52
16.11.1962	Convention Between France and Switzerland Concerning the Protection of Lake Leman Against Pollution, Paris; RGDIP, 1963, p. 630.	76
20.12.1962	Agreement on the Protection of the Salmon in the Baltic Sea, Stockholm (Denmark, Fed. Rep. Germany, Sweden); IEL/MA, 962:95.	92, 95, 101, 102
31.1.1963	Convention Supplement to the Paris Convention of 29th July 1960 on Third Party Liability in the Field of Nuclear Energy, Brussels (Denmark, France, Norway, Spain, Sweden, United Kingdom); IEL/MA, 963:10.	52
29.4.1963	Agreement Concerning the International Commission for the Protection of the Rhine against Pollution, Bern (France, Fed. Rep. Germany, Luxembourg, Netherlands, Switzerland); IEL/MA, 963:31.	25, 76, 123
21.5.1963	Vienna Convention on Civil Liability for Nuclear Damage (Argentina, Bolivia, Cameroon, Cuba, Philippines, Trinidad and Tobago, United Arab Republic); IEL/MA, 963:40.	39, 52
5.8.1963	Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, Moscow (Nearly all Member States of the United Nations Organization with noted exceptions: India, France etc.); IEL/MA, 963:59.	49, 78, 105, 106
26.10.1963	Act Regarding Navigation and Economic Cooperation Between the States of the Niger Basin, Niamey (Cameroon, Chad, Dahomey, Guinea, Ivory Coast, Mali, Niger, Nigeria, Upper Volta); IEL/MA, 963:80.	76
22.5.1964	Convention and Statutes Relating to the Development of the Chad Basin, Fort Lamy (Cameroon, Chad, Niger, Nigeria); Journal Officiel de la République fédérale du Cameroun, Sept. 15, 1964.	76, 90, 102
17.7.1964	Agreement Between Poland and USSR Concerning the Use of Water Resources in Frontier Waters, Warsaw; UNTS, vol. 552, p. 188.	74

25.11.1964	Agreement Between Japan and the USA on King Crab Fishing off Alaska, Washington; Department of State Bulletin, 892-93, December 21, 1964.	93, 95, 97
25.11.1964	Agreement Concerning the Niger River Commission and the Navigation and Transport on the River Niger, Niamey (Cameroon, Chad, Dahomey, Guinea, Ivory Coast, Mali, Niger, Nigeria, Upper Volta); IEL/MA, 964:87.	74, 76
27.1.1967	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, Washington (most of the Member States of the UN); IEL/MA, 967:07.	18, 48
7.12.1967	Agreement Between Austria and Czechoslovakia Concerning Water Resources in Frontier Waters, Vienna; Bundesgesetzblatt Oesterreich, March 26, 1970, p. 857.	76
15.9.1968	African Convention on the Conservation of Nature and Natural Resources, Algiers (Central African Republic, Egypt, Ghana, Kenya, Malagasy Republic, Niger, Senegal, Swaziland, Upper Volta, Zambia); IEL/MA, 968:68.	32, 76, 84, 94, 10 ₀ , 101
16.9.1968	European Agreement on the Restriction of the Use of Certain Detergents in Washing and Cleaning Products, Brussels (Belgium, France, Fed. Rep. Germany, Italy, Luxembourg, Netherlands); IEL/MA, 968:75.	72, 112
13.12.1968	European Convention for the Protection of Animals During International Transport, Paris (Austria, Belgium, Denmark, France, Fed. Rep. Germany, Iceland, Luxembourg, Norway, Sweden, Switzerland, United Kingdom); IEL/MA, 968: 92.	88
7.1.1969	Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution (7 Oil Companies); ILM, 1969, p. 497.	53
9.6.1969	Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil, Bonn (Belgium, Denmark, France, Fed. Rep. Germany, Norway, Sweden, United Kingdom); IEL/MA, 969:43.	34, 60

21.10.1969	Amendments to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, London (20 States, including Belgium, Canada, France, Japan, Liberia, Norway, Saudi Arabia, USSR, UK and USA); IEL/MA, 969:77.	59
23.10.1969	Convention on the Conservation of the Living Resources of the Southeast Atlantic, Rome (Bulgaria, Japan, Poland, Portugal, South Africa, Spain, USSR); IEL/MA, 969:79.	91, 103
29.11.1969	International Convention on Civil Liability for Oil Pollution Damage, Brussels (Fiji, Ivory Coast, Liberia, Senegal); IEL/MA, 969:88.	38, 53, 60
29.11.1969	International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, Brussels (Belgium, Denmark, Fiji, France, Japan, Liberia, Norway, Senegal, Spain, Sweden, UK); IEL/MA, 969:89.	60
10.6.1970	Benelux Convention on the Hunting and Protection of Birds, Brussels (Belgium, Luxembourg, Netherlands); IUCN/CL.	91, 101, 103
2.2.1971	Convention on Wetlands of International Importance, Especially as Waterfowl Habitats, Ramsar (Iran) (Australia, Bulgaria, Finland, Fed. Rep. Germany, Greece, Iran, Norway, South Africa, Sweden, Switzerland, UK); ILM, 1972, p. 969.	86, 100
15.7.1271	Agreement Between Canada and Norway on Sealing and the Conservation of the Seal Stock in the North-West Atlantic, Ottawa; FAO Fisheries Circular, no. 326, FIRD/C 326, p. 62.	96, 97, 103
16.9.1971	Agreement Concerning Cooperation in Taking Measures Against Pollution of the Sea by Oil, Copenhagen (Denmark, Finland, Norway, Sweden); IUCN/CL.	60
18.12.1971	Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, Brussels (Algeria, Belgium, Brazil, Fed. Rep. Germany, Ghana, Poland, Portugal, Sweden, Switzerland, UK, USA, Yugoslavia); ILM 1972, p. 284.	53, 60

11.2.1972	Convention for the Conservation of Antarctic Seals, London (Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, USSR, USA); ILM, 1973, p. 251.	19, 92, 94, 95, 96, 97, 98
15.2.1972	Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, Oslo (Belgium, Denmark, Finland, France, Fed. Rep. Germany, Iceland, Netherlands, Norway, Portugal, Spain, Sweden, United Kingdom); ILM, 1972, p. 263.	19, 49, 50, 65, 104, 106, 112
4.3.1972	Convention Between Japan and the USA for the Protection of Migratory Birds in Danger of Extinction and their Environment, Tokyo; IUCN/CL.	91, 99, 101
15.4.1972	Agreement Between Canada and the USA on Great Lakes Water Quality, Ottawa; ILM, 1972, p. 694.	75, 76, 107
20.4.1972	Convention Between Italy and Switzerland Concerning the Protection of Waters from Pollution, Rome; Recueil des lois (Switzerland), 1973, no. 38, Italian edition.	76
24.5.1972	Agreement Between the USA and USSR for Cooperation in the Field of Environmental Protection; Moscow; ILM, 1972, p. 761.	20
23.11.1972	Convention Concerning the Protection of the World Cultural and Natural Heritage (adopted by the General Conference of UNESCO on November 16, 1972 in Paris); IEL/MA, no. 872:86/1.	87
29.12.1972	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (adopted in London by an Intergovernmental Conference, on 13.11.1972, open for signature on 29.12.1972); ILM, 1972, p. 1358.	31, 49, 50, 64, 104
3.3.1973	Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington (27 States, including Brazil, Canada, Fed. Rep. Germany, German Democratic Republic, Italy, Norway, South Africa, Sweden, Switzerland, USA); I.L.M., 1973, p. 1085.	18, 88, 100, 103, 105

0.0.1070	Governments of the Member States of the European Economic Community on Information for the Commission and for the Member States, Brussels (Belgium, Denmark, Eire, Fed. Rep. Germany, Italy, Luxembourg, Netherlands, United Kingdom); OJEC, no. C 9/1 of 15.3.1973.	
30.8.1973	Agreement Between Mexico and the USA on the Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River, Mexico City; ILM, 1973, p. 1105; AJIL, 1974, p. 376.	75
13.9.1973	Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts, Gdansk (Denmark, Fed. Rep. Germany, Finland, German Democratic Republic, Poland, Sweden, USSR); ILM, 1973, p. 1291.	91, 103, 111
20.9.1973	Agreement Between the Federal Republic of Germany and the German Democratic Republic Concerning the Principles of the Maintainance and the Improvement of Boundary Waters, Bonn; "Umwelt", no. 26, of Oct. 26, 1973.	75
10.10.1973	Convention Between Japan and USSR for the Protection of Migratory Birds and Birds in Danger of Extinction, of their Environment and of their Habitat, Moscow; IUCN/CL.	96, 99, 100
2.11.1973	Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances Other than Oil, London (drafted by the International Conference on Marine Pollution); ILM, 1974, p. 605; AJIL, 1974, p. 577.	50,60
15.11.1973	Agreement on the Conservation of Polar Bears, Oslo (Canada, Denmark, Norway, USA, USSR); ILM, 1974, p. 13.	92, 94, 95, 99, 101
19.11.1973	Treaty between Argentina and Uruguay Concerning the La Plata River, Montevideo; ILM, 1974, p. 251.	74, 75
15.1.1974	International Convention for the Prevention of Pollution from Ships, London (adopted by the International Conference on Marine Pollution); ILM, 1973, p. 1319.	18, 31, 50, 61 et seq., 106, 107

Agreement of the Representatives of the 32

5.3.1973

6.2.1974	Agreement Between Australia and Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment, Tokyo; IUCN/CL.	92, 96, 99, 101
19.2.1974	Nordic Environmental Protection Convention, Stockholm; IUCN/CL.	19, 27, 33, 35, 36, 39
22.3.1974	Convention on the Protection of the Baltic Sea Area, Helsinki (Denmark, Fed. Rep. Germany, Finland, German Democratic Republic, Poland, Sweden, USSR); ILM, 1974, p. 544.	19, 50, 63, 66, 68, 104
9.5.1974	Agreement between the Federal Republic of Germany and the USA on Cooperation in the Field of Environmental Protection, Bonn; ILM, 1974, p. 598.	20
4.6.1974	Convention for the Prevention of Marine Pollution from Land-Based Sources, Paris (Austria, Belgium, Denmark, France, Fed. Rep. Germany, Iceland, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom participated in the Conference which drafted this Convention); ILM, 1974, p. 352.	27, 51, 67, 108
4.9.1974	Offshore Pollution Liability Agreement (OPOL), London (13 Oil Companies); ILM, 1974, p. 1409.	53
13.6.1975	Treaty Between Iran and Iraq on International Borders and Good Neighbourly Relations, Baghdad; ILM, 1975, p. 1138.	76
16.2.1976	Convention and Protocols for the Protection of the Marine Environment against Pollution in the Mediterranean, Barcelona (the Final Act of the Conference which prepared these treaties was adopted by Spain, France, Monaco, Italy, Malta, Yugoslavia, Greece, Turkey, Cyprus, Syria, Lebanon, Israel, Egypt, Libya, Tunisia and Morocco); ILM, 1976, p. 290.	64, 66, 104

^{*)} Only treaties specifically concerning the protection of the environment are listed here.

The names of Contracting Parties to multilateral treaties are indications as to the general territorial scope of each treaty and do not necessarily mean that those treaties are only or still in force between the States mentioned.

Table of Abbreviations

AFDI Annuaire français de droit international.

AJIL American Journal of International Law.

IEL/MA International Environmental Law, Multilateral Treaties,

edited by W.E. Burhenne, compiled by R. Muecke, E. Schmidt

Verlag, Berlin, 1972, 3 vols.

ILM International Legal Materials.

IUCN/CL Environmental Law Centre of the International Union for the

Conservation of Nature and Natural Resources.

de Martens-

Triepel de Martens-Triepel, Nouveau recueil général

des traités.

OJEC Official Journal of the European Communities.

RGDIP Revue générale de droit international public.

TIAS Treaties and other International Acts Series.

UNTS United Nations Treaty Series.

UN-UIR United Nations Legislative Texts and Treaty Provisions Concerning

the Utilization of International Rivers for Other Purposes Than

Navigation (ST/LEG/SER.B/12).

Index

Actio popularis 48. Air Pollution 77 et seq., 111. Birds 82, 83, 86, 91 et seq., 93, 94, 95, 96, 98, 99, 100, 101, 103. Charter of Economic Rights and Duties of the States 25, 31, 42. Common Heritage of Mankind 70, 87. Commons 18, 48. Compensation for Environmental Damage 52 et seq. Conference on Security and Cooperation in Europe 56, 109. Conference on the Law of the Sea 68. Council for Mutual Economic Assistance 113. Council of Europe 24, 25, 26, 27, 34, 57, 70, 78, 79, 82, 104, 105, 112, 113. Christal Agreement 53. Customary Law 18. Declarations 23 et seq. Developing Countries 11. Diplomatic Protection 39 et seq., 54. Due Diligence 54. Ecological Crisis 9. Economic Aspects of the Protection of the Environment 13 et seq. Economic Commission for Europe (UN) 24, 78, 79, 111, 113. Economic Growth 10. Enskeri Case 52. Equality of States 29, 30. European Communities 20, 21 et seq., 24, 25, 26, 28, 32, 48, 56, 72, 79, 80, 104, 112, 113, 115 et seq. FAO 24, 111, 113. Fauna 80 et seq. Flora 80 et seq. French Nuclear Tests in the Pacific Case 40. IAEA 24, 111. IMCO 24, 31, 53, 59, 60, 108, 111, 113. Information on Environmental Risk 30. Interdisciplinary Approach to Environmental Law 15. International Cooperation 12 et seq., 20, 29, 104, 109 et seq. International Environmental Law 14 et seq., 29. International Organizations 20, 110 et seq. International Responsibility 18, 29, 41 et seq. Lake Lanoux Case 47. Lakes 69 et seq., 103, 112. Liability 18, 29, 41 et seq. Living Resources of the Sea 90, 91, 92, 93, 97, 102, 103, 111. Management of Natural Resources 110, 112. Marine Pollution 48 et seq., 57 et seq., 103, 104, 106, 107, 108, 111, 112. Migratory Species 81, 82, 83, 92, 93, 94, 95, 96, 98, 99, 100, 101. Motor Vehicles 78, 79, 111. Nature Conservation 81, 83, 84, 85, 86, 87, 99 et seg. Noise 77, 78. NATO 111, 113, 114.

OECD 21, 24, 28, 33, 35, 36, 111, 113, 114.

OPOL Agreement 53.

Polar Bears 92, 94, 95, 99, 101.

Rivers and Lakes 69 et seq., 103, 112.

Poro v. The Coal Mines of Lorraine Case 38.

Prevention 29, 35, 54, 56.

Public opinion 10, 103, 114.

Recommendations 23 et seq.

Regional Cooperation 18, 70 et seq., 77, 78, 104, 113.

Reserves 81, 84, 85, 86, 87, 99.

Responsibility 18, 29, 41 et seq.

Salmon 92, 94, 95, 96, 101, 102.

Seals 92, 94, 95, 96, 97, 98, 102, 103, 112.

Shared Natural Resources 69, 112.

Shellfish 93, 95, 97, 102, 111.

Soft Law 23 et seq., 41, 69, 103.

Sonic boom 77.

Stockholm Conference on the Human Environment 11, 24, 28, 56, 58, 69, 77,

81, 104, 109, 110.

Stockholm Declaration on the Human Environment 11, 12, 25, 27, 28, 30, 41, 42, 58, 69, 77, 81, 105, 109.

Torrey Canyon Case 53, 59.

TOVALOP 53.

Trade in Endangered Species 88 et seq., 100 et seq., 103, 105.

Trail Smelter Case 12, 40, 43 et seq., 55, 80, 109.

Transfrontier Pollution 35, 36, 37 et seq., 41, 77.

Treaties 18 et seq., 57 et seq., 72 et seq., 80 et seq., 103 et seq., 110.

Ultra-hazardous Activities 54.

UN Conference on the Law of Sea 68.

UNEP (United Nations Environment Programme) 12, 31, 57, 113.

UNESCO 24, 87, 111, 113.

UNO 21, 24, 25, 26, 27, 28, 30, 31, 109, 113.

Whales 90, 92, 93, 94, 95, 97, 98, 101.

Wildlife 80 et seq.

World Health Organization 24, 111, 113.

World Meteorological Organization 24, 111, 113.

The International Union for Conservation of Nature and Natural Resources (IUCN) is an independent international body, formed in 1948, which has its headquarters in Morges, Switzerland. It is a Union of sovereign states, government agencies and non-governmental organizations concerned with the initiation and promotion of scientifically-based action that will ensure perpetuation of the living world - man's natural environment - and the natural resources on which all living things depend, not only for their intrinsic cultural or scientific values, but also for the long-term economic and social welfare of mankind.

This objective can be achieved through active conservation programmes for the wise use of natural resources in areas where the flora and fauna are of particular importance and where the landscape is especially beautiful or striking, or of historical, cultural or scientific significance. IUCN believes that its aims can be achieved most effectively by international effort in co-operation with other international agencies, such as Unesco, UNEP and FAO.

The World Wildlife Fund (WWF) is an international charitable organization dedicated to saving the world's wildlife and wild places, carrying out the wide variety of programmes and actions that this entails. WWF was established in 1961 under Swiss law, with headquarters also in Morges.

Since 1961, IUCN has enjoyed a symbiotic relationship with its sister organization, the World Wildlife Fund, with which it works closely throughout the world on projects of mutual interest. IUCN and WWF now jointly operate the various projects originated by, or submitted to them.

The projects cover a very wide range, from education, ecological studies and sunveys, to the establishment and management of areas as national parks and reserves and emergency programmes for the safeguarding of animal and plant species threatened with extinction as well as support for certain key international conservation bodies.

WWF fund-raising and publicity activities are mainly carried out by National Appeals in a number of countries, and its international governing body is made up of prominent personalities in many fields.

