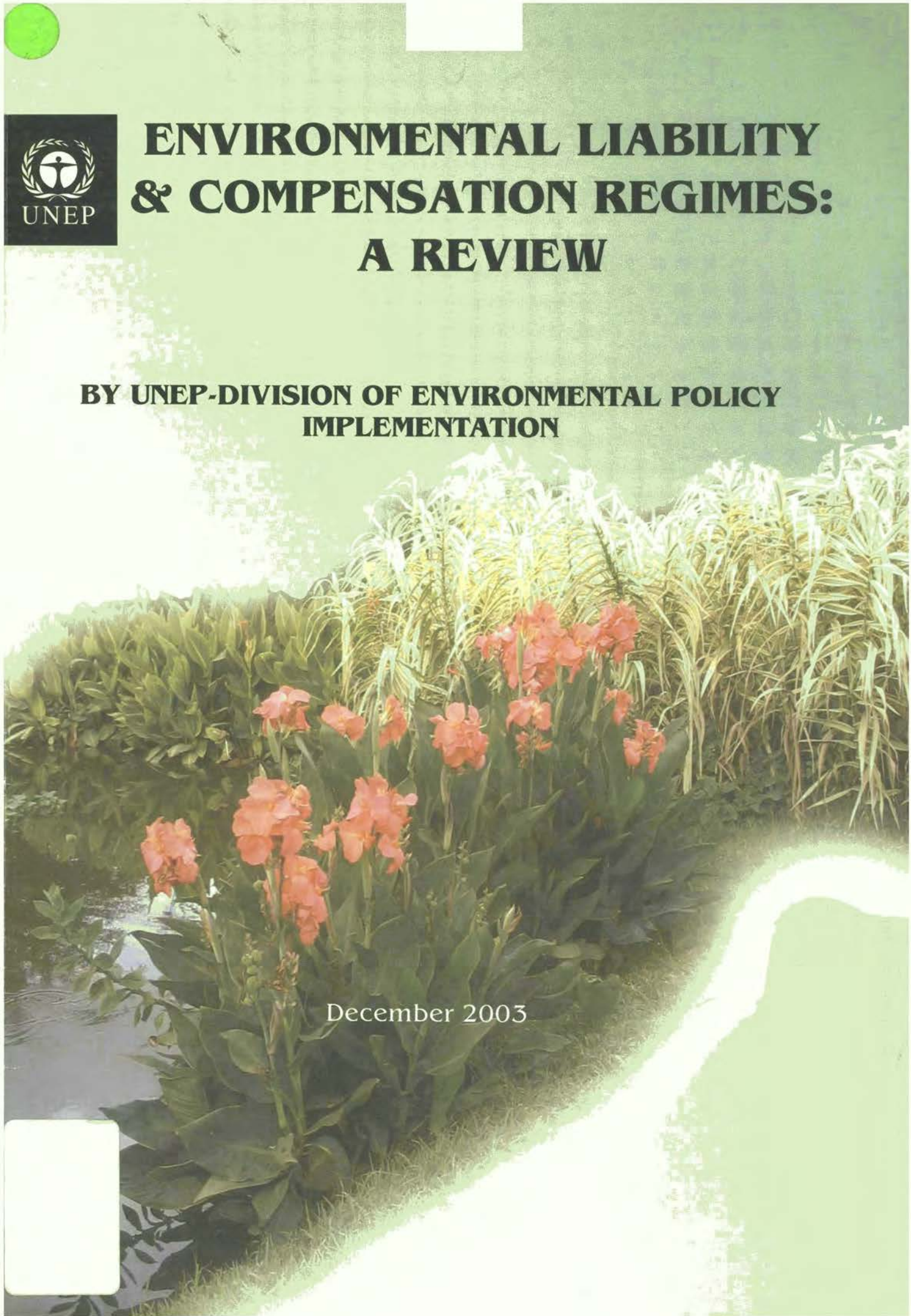




ENVIRONMENTAL LIABILITY & COMPENSATION REGIMES: A REVIEW

**BY UNEP-DIVISION OF ENVIRONMENTAL POLICY
IMPLEMENTATION**

December 2003



**LIABILITY & COMPENSATION REGIMES RELATING
TO ENVIRONMENTAL DAMAGE:**

A REVIEW

**BY UNEP-DIVISION OF ENVIRONMENTAL POLICY
IMPLEMENTATION**

December 2003

0504/02

ISBN Number 92-807-2395-4

TABLE OF CONTENTS

- Foreword vi
- List of Abbreviations viii
- Acknowledgements vii
- List of Agreements, Laws and Cases Considered: ix

- A. SUMMARY AND OVERVIEW 1
 - 1. Introduction: 2
 - 2. Identified Issues and Gaps: 3
 - 2.1 Recognition of environmental damage 3
 - 2.2 Threshold at which environmental damage entails liability 3
 - 2.3 Persons liable or channeling liability 3
 - 2.4 Burden of proof/ type of liability 4
 - 2.5 Access to Justice 4
 - 2.6 Available defenses or Exemptions from Liability 4
 - 2.7 Financial limitations of liability 5
 - 2.8 Time Limitations 5
 - 2.9 Financial security 6
 - 2.10 Creation of funds 6
 - 2.11 Jurisdiction 6
 - 2.12 Reparation for damage 6
 - 2.13 Recommendations for action: 7

- B. LIABILITY AND COMPENSATION REGIMES RELATED TO ENVIRONMENTAL DAMAGE 10
 - 1. Introduction 11
 - 2. Working Definition 12
 - 3. Agreements covering Liability and Compensation Regimes 14
 - 3.1 Soft Law Instruments on Liability and Compensation: 14
 - 3.2 Identified Global Regimes 15
 - 3.3 Identified Regional Regimes 19
 - 3.4 Identified National Regimes 21
 - (i) *North America* 21
 - (ii) *Europe* 25

(iii)	<i>The Middle East</i>	28
(iv)	<i>Africa</i>	28
(v)	<i>Asia</i>	30
(vi)	<i>The Pacific</i>	34
(vii)	<i>Latin America & The Caribbean</i>	35
4.	Case Law	41
5.	Agreements referring to Issues of Liability & Compensation	44
	5.1 Identified Global Regimes	44
	5.2.1 UNECE:	46
	5.2.2 The Regional Seas Conventions	47
	5.2.2.1 <i>Africa</i>	48
	5.2.2.2 <i>The Middle East</i>	48
	5.2.2.3 <i>Asia & The South Pacific</i>	48
	5.2.2.4 <i>Latin America & The Caribbean</i>	48
	5.2.2.5 <i>Europe</i>	49
	5.2.3 Other Regional Conventions	49
6.	Draft Agreements Addressing Specifically Liability and Compensation Issues	51
7.	Common Features & Trends	53
	7.1 Rationale for developing liability and compensation regimes	53
	7.2 Scope of application	54
	7.3 Definition of damage	54
	7.4 Threshold at which environmental damage entails liability	54
	7.5 Persons Liable or Channeling Liability	55
	7.6 Burden of proof/type of liability	55
	7.7 Access to justice	56
	7.8 Available defenses or exemptions from liability	57
	7.9 Financial limitations of liability	58
	7.10 Time limitations	58
	7.11 Financial security	59
	7.12 Creation of funds	59
	7.13 Jurisdiction	59
	7.14 Reparation for damage	59
	7.15 Synopsis	60
8.	Gaps and Proposals for Action	62

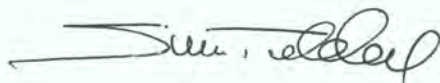
8.1	Gaps in the current network of liability and compensation	63
8.2	Recommendations for action	64
9.	Experts Group Meeting held at Geneva, 13-15 May 2002	65
9.1	Experts review of the analysis made	65
9.2	Issues and Gaps Identified	65
9.3	Recommendations for Future Course of Action	66
10.	Bibliography	67

FOREWORD

Environmental concern arising from the increasing economic activities that entails risk of environmental damage with transboundary and global detrimental impacts have prompted the international community to address the issue of liability and compensation for environmental damage. These activities mainly arise in relation to nuclear activities, oil pollution and the marine environment, the transport of hazardous substances and wastes, and space objects.

As the Review shows, there are numerous legal instruments - MEAs, regional environmental agreements, national laws, soft law instruments, and judicial precedents - which are concerned with apportionment of liability and compensation caused by damaging activities - whether these be caused to natural resources, human health, or to property. Notwithstanding the existence of these agreements, many areas still require clarification - such as the definition of environmental damage, which has not been universally determined. Other contentious areas have been in determining the threshold at which damage entails liability, the concept of State liability for environmental damage and the nature of reparation.

The Study reviews a number of existing and draft legal instruments, and further, offers a general assessment of the common features and trends in the existing civil liability and compensation regimes. Accordingly, a number of recommendations are made to strengthen the current network of agreements, as well as to make any new agreements more effective in their environmental objectives. These recommendations are, to a large extent, attributable to a UNEP Experts Meeting which was held at Geneva in May 2002, and will be instrumental in determining the best possible course of action for UNEP to focus on in its future work. UNEP, in pursuance of its Mission Statement to provide leadership and encourage partnership in caring for the environment, is prepared to redouble efforts with all relevant stakeholders to fashion out clear and acceptable dimensions of civil liability and compensation regimes. This Review should, therefore, be seen as a reinforcement of its determination to do so given that civil liability and compensation is a crucial component of sustainable development.



By Svein Tveitdal
Director
UNEP - Division of Environmental Policy Implementation


ACKNOWLEDGEMENTS

The compilation of this material on existing trends at national, regional and global level with regards to Liability and Compensation for environmental damage derived considerable benefit and ideas from many experts and researchers. The completion of this study is therefore a result of a team work and effort where many people and experts contributed in many ways to make it what it is in its final form.

Specific thanks and appreciation are directed to Ms. Jodie Hierlmeier who in the year 2001 was an intern at UNEP - Division of Environmental Policy Implementation (DEPI). She is indeed the person who did most of the research work at the beginning including compiling all the requisite materials. Many thanks to her. Mr. Everest Nwankwo also an intern in UNEP- DEPI in 2002 equally did a great job in further research, proof reading, formatting and refining the draft. Our sincere appreciation and thanks to these interns.

Colleagues at UNEP - DEPI, in particular, Mr. Donald Kaniaru, then Director, DEPI and Ms. Amy Hindman, Legal Advisor to the Executive Director for their review of the draft and constructive comments on the content, structure, conclusions reached and recommendations made on the Study were really helpful and useful to further enrich the Study done. To them, many thanks. This study would not have been completed if not for the full participation, comments and input made by Experts, in their personal capacities, which met to review the draft Study, in particular, its accuracy in Geneva in May 2002. Their inspiration, criticisms, comments and additional information and material on the draft Study were indeed useful to further enrich this final document on liability and compensation for environmental damage. In particular, experts Dr. Michael O'Brien, Dr. Jose Juan Gonzalez Marquez, and Dr. Eva Kruzikova who even after the Experts Meeting followed up the deliberations with specific detail additional information to be added and included in the Study. To all of them, we sincerely say thank you for the support, commitment and recommendations made to this Study. We hope and trust that all information will be useful to all of us working on these technical issues relating to environmental liability and compensation.

Particular thanks also go to Ms. Sarah Kariuki, a colleague in UNEP- DEPI who tirelessly undertook all the tasks of assisting us in the typing and amending several times the draft Study to its final shape. To her, we equally appreciate her commitment to this work. To all those who also helped us in one way or the other, but could not list them by names, we also say thank you and let us keep the good work.



Elizabeth Maruma Mrema
Legal Officer
UNEP - Division of Environmental Policy Implementation

LIST OF ABBREVIATIONS

Aarhus Convention	- Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters
CERCLA	- Comprehensive Environmental Response, Compensation and Liability
CLC	- International Convention on Civil Liability for Oil Pollution Damage
CRAMRA	- Convention on the Regulation of Antarctic Mineral Resource Activities
CSC	- Convention on Supplementary Compensation for Nuclear Damage
EEZ	- Exclusive Economic Zone
FEPA	- Federal Environmental Protection Agency
HNS	- Hazardous and Noxious Substances
IAEA	- International Atomic Energy Agency
IDI	- Institut de Droit International
IMO	- International Maritime Organization
IOPC	- International Oil Pollution Compensation
LGEEPA	- Ley General del Equilibrio Ecológico y Protección al Ambiente
LLMC	- Limitation of Liability for Maritime Claims
LMOs	- Living Modified Organisms
MEAs	- Multilateral Environmental Agreements
NEAP	- National Environmental Action Plan
OECD	- Organization for Economic Cooperation and Development
OPA	- Oil Pollution Act
PROFEPA	- Environmental Protection Attorney General's Office
P&I	- Protection & Indemnity
PRPs	- Potentially Responsible Parties
RECLD	- Response, Compensation and Liability for Environmental Damage Act
SDR	- Special Drawing Right
UNCC	- United Nations Compensation Commission
UNCED	- United Nations Conference on Environment and Development
UNECE	- United Nations Economic Commission for Europe
UNEP	- United Nations Environment Programme
UN	- United Nations

LIST OF AGREEMENTS, LAWS AND CASES CONSIDERED:

No. Conventions, Agreements, National Laws and Case Law

Global Regimes:

- 1 1972 Stockholm Declaration (Stockholm Declaration of the United Nations Conference on the Human Environment); June 16, 1972.
- 2 1992 Rio Declaration (Rio Declaration on Environment and Development); June 14, 1992.
- 3 1991 Resolution 687 (United Nations Security Council's Resolution 687, paragraph 16)
- 4 1997 Strasbourg Resolution (Resolution on the Responsibility and Liability under International Law for Environmental Damage); adopted 4 September 1997.
- 5 2001 Montevideo Programme III (The Programme for the Development and Periodic Review of Environment Law for the First Decade of the Twenty-First Century, Decision 21 / 23 of the Governing Council of 9 February 2001).
- 6 1963 Vienna Convention (IAEA Convention on Civil Liability for Nuclear Damage); adopted 29 May 1963, in force on 12 November 1977.
- 7 1969 CLC as amended by 1992 Protocol (International Convention on Civil Liability for Oil Pollution Damage (Brussels)); adopted 29 November 1969, in force on 19 May 1975. This was amended by the Protocols of 1976 and 1992; the 1992 Protocol came into force on 30 May 1996.
- 8 1971 FUND as amended by 1992 Protocol (International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Brussels)); adopted on 18 December 1971, in force on 16 October 1978. This was amended by the Protocols of 1976 and 1992; the 1992 Protocol came into force on 30 May 1996.
- 9 1971 NUCLEAR Convention (Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (Brussels)); adopted 17 December 1971, in force on 15 July 1975.
- 10 1972 Space Objects (Convention on International Liability for Damage Caused by Space Objects, London, Moscow, Washington 1972); adopted 29 March 1972, in force 1 September 1972.
- 11 1976 LLMC (Convention on Limitation of Liability for Maritime Claims (London)); adopted on 19 November 1976, in force on 1 December 1986.
- 12 1988 Joint Protocol (Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention (Vienna)); adopted 21 September 1988, in force on 27 April 1992.
- 13 1988 CRAMRA (Convention on the Regulation of Antarctic Mineral Resource Activities (Wellington)); adopted 2 June 1988, but not yet in force.
- 14 1996 HNS (International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (London)); adopted 3 May 1996, but not yet in force.
- 15 1996 LLMC Protocol (Protocol to Amend the Limitation of Liability for Maritime Claims (London)); adopted 2 May 1996, but not yet in force.
- 16 1997 CSC (Convention on Supplementary Compensation for Nuclear Damage (Vienna)); adopted 12 September 1997, but not yet in force.

- 17 1997 Vienna Protocol (Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage); adopted on 12 September 1997, but not yet in force. 1999 Basel Protocol (Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal); adopted on 10 December 1999, but not yet in force.
- 19 2001 Bunker Oil Pollution (International Convention on Civil Liability for Bunker Oil Pollution Damage); adopted 23 March 2001, but not yet in force.
- 20 1967 Helsinki Rules (The Helsinki Rules on the Uses of the Waters of International Rivers); adopted by the International Law Association August 1966.
- 21 1972 London Dumping Convention (Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London)); adopted 29 December 1972, in force on 30 August 1975.
- 22 1982 UNCLOS (United Nations Convention on the Law of the Sea (Montego Bay)); adopted 10 December 1982, in force on 16 November 1994.
- 23 1982 Montreal Rules (Montreal Rules on Water Pollution in an International Drainage Basin); adopted 1987.
- 24 1992 CBD (1992 Convention on Biological Diversity); adopted 22 May 1992; in force on 29 December 1993.
- 25 1996 Private Law Remedies (Articles on Private Law Remedies for Transboundary Damage of International Watercourses, Helsinki); adopted 1996
- 26 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses; adopted 21 May 1997, but not yet in force.
- 27 2000 Cartagena Protocol (Cartagena Protocol on Biosafety to the Convention on Biological Diversity); adopted 23 February 2000, but not yet in force.

Regional Regimes:

- 1 1960 Paris Convention (OECD Convention on Third Party Liability in the Field of Nuclear Energy); adopted on 29 July 1960, in force on 1 April 1968. Amended by Protocols of 1964 and 1982.
- 2 1963 Brussels Supplementary Convention (Supplementary Convention To the 1960 Paris Convention (Brussels)); adopted 31 January 1963, in force on 4 December 1979; amended by the Protocols of 1964 and 1982.
- 3 1977 Sea Bed Mineral Resources (Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Sea Bed Mineral Resources (London)); adopted 1 May 1977, but not yet in force.
- 4 1989 CRTD (UN/ECE Convention on Civil Liability for Damage Caused During Carriage of Dangerous Good by Road, Rail and Inland Navigation Vessels (Geneva)); adopted 10 October 1989, but not yet in force.
- 5 1993 Lugano Convention (Convention on Civil Liability for Damage Resulting From Activities Dangerous to the Environment (Lugano)); adopted 21 June 1993, but not yet in force.
- 6 1991 Environmental Impact Assessment (UN/ECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo)); adopted 25 February 1991, in force on 10 September 1997.
- 7 1992 Watercourse Convention (UN/ECE Convention on the Protection and Use of Transboundary Watercourse and International Lakes (Helsinki)); adopted 17 March 1992, in force on 6 October 1996.
- 8 1992 Industrial Accidents (UN/ECE Convention on the Transboundary Effects of Industrial Accidents (Helsinki)); adopted 17 March 1992, in force on 19 April 2000.
- 9 1998 Convention on the Protection of the Environment Through Criminal Law (Strasbourg), adopted in 1998, but not yet in force.
- 10 1998 Aarhus Convention (Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus)); adopted 25 June 1998, but not yet in force.
- 11 1999 White Paper on Environmental Liability; adopted by the European Commission in February 1999.
- 12 2001 draft EU Environmental Liability (Proposal for a Directive of the European Parliament and of the Council on Environmental Liability with regard to the Prevention and Restoration of Environmental Damage).
- 13 1999 Protocol on Water and Health (Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourse and International Lakes (London)); adopted 17 June 1999, but not yet in force.
- 14 1981 West and Central African Convention (1981 Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan)); adopted 23 March 1981, in force on 5 August 1984.
- 15 1985 Eastern African Convention (Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi)); adopted 21 June 1985, in force on 30 June 1996.
- 16 1978 Kuwait Convention (Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution); adopted 24 April 1978, in force on 1 July 1979.
- 17 1990 Kuwait Protocol (Protocol for the Protection of the Marine Environment Against Pollution from Land-Based Sources); adopted 21 February 1990, in force on 2 January 1993.

- 18 1982 Jeddah Convention (Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (Jeddah)); adopted 14 February 1982, in force on 20 August 1985.
- 19 1986 SPREP Convention (Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Noumea)); adopted 24 November 1986, in force on 22 August 1990.
- 20 1981 South-East Pacific Convention (1981 Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific (Lima)); adopted 12 November 1981, in force on 19 May 1986.
- 21 1983 Cartagena Convention (1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena)); adopted 24 March 1983, in force on 11 October 1986.
- 22 1974 Baltic Sea Convention (Convention for the Protection of the Marine Environment of the Baltic Sea Area); adopted 22 March 1974, in force on 3 May 1980.
- 23 1976 Mediterranean Convention (Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona)); adopted 16 February 1976, in force on 12 February 1978. The 1995 amendment to the Convention is not yet in force.
- 24 1992 Black Sea Convention (Convention on the Protection of the Black Sea Against Pollution (Bucharest)); adopted 21 April 1992, in force on 15 January 1994.
- 25 1992 North-East Atlantic Convention (Convention for the Protection of the Marine Environment of the North-East Atlantic (Paris)); adopted 22 September 1992, but not yet in force.
- 26 1991 Bamako Convention (Convention on the Ban of Import into Africa and the Control of the Transboundary Movement and Management of Hazardous Wastes within Africa (Bamako)); adopted 30 January 1991, in force on 20 March 1996.
- 27 1991 Antarctic Protocol (Protocol on Environmental Protection to the Antarctic Treaty (Madrid)); adopted 3 October 1991, but not yet in force.

National Regimes

- 1 1980 USA CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act of 1980) 42 U.S.C. ss. 9601-9675.
- 2 1990 USA OPA (Oil Pollution Act of 1990) 33 U.S.C. ss. 2701 – 2761.
- 3 1985 USA Fisheries Act R.S.C. 1985 c. F-14, ss. 34-42.
- 4 1985 Canada Shipping Act R.S.C. 1985 c. S-9, ss. 673-727.
- 5 1999 CEPA (The Canadian Environmental Protection Act) S.C. 1999 c. 33, ss. 39-103. 6 British Columbia: 1996 Waste Management Act R.S.B.C. 1996 c. 482, ss. 26-28. 7 Ontario: 1990 Environmental Protection Act R.S.O. 1990 E.19, ss.17-18, 40-45, 92-97. 8 1990 German Environmental Liability Act Umwelthaftungsgesetz of 10 December 1990.
- 9 Italian Law 349/1986 Gassetta Ufficiale No. 162, 15 July 1986, Suppl. Ord. No. 59.
- 10 Denmark 1994 Compensation for Environmental Damage Act 225/94
- 11 Oman 1974 Marine Pollution Control Law Royal Decree No. 34/74.
- 12 Oman 1982 Law on the Protection of the Environment and Prevention of Pollution Royal Decree No. 10/82
- 13 Kenya Environmental Management and Coordination Act No.8 of 1999
- 14 Nigerian 1999 Draft Bill: RECLEL (Response, Compensation and Liability for Environmental Damage Act)
- 15 The Cook Islands Prevention of Marine Pollution Act No. 5, 1998
- 16 Taiwan 2000 Soil and Groundwater Pollution Remediation Act, promulgated 2 February 2000
- 17 Japan 1973 Compensation for Health Damages caused by Environmental Pollution

Case Law

- 1 *Trail Smelter Arbitration* (U.S.A. v. Canada), 1938-1941, 9 I.L.R. 315
- 2 *Lac Lanoux Arbitration* (France v. Spain), 1957, 24 I.L.R. 101.
- 3 *The Nuclear Tests Cases* (Australia v. France), I.C.J. Rep. (1973) 99, (1974) 253.
- 4 *Cosmos 954* (Canada v. U.S.S.R.) 1979, 18 I.L.M. 899.
- 5 *Commonwealth of Puerto v. S.S. Zoe Colocotroni* 456 F. Supp.1327 (1978); 628 F.2d 652 (1980).
- 6 *The Patmos Case* (General Nation Maritime Transport Co v. The Patmos Shipping Co.), Court of Messina, 1st Civil Division (Italy), 30 July 1986.
- 7 *Case Concerning the Gabčíkovo-Nagymaros Project* (Hungry v. Slovak Republic), 32 ILM (1993) 1293.

A. SUMMARY AND OVERVIEW

1. INTRODUCTION:

Although the apportionment of liability and consequently reparation measures to entities for environmental damages resulting from their activities has become a pivotal element for environmental protection and sustainable development, the international community is yet to fashion out clear and acceptable dimensions for the apportionment thereof. This lack of firm grip by the international community has also affected the effectiveness of national legislation on the issue.

Approximately 27 multilateral environmental agreements (MEAs), 2 draft multilateral environmental agreements, 26 regional environmental agreements, 26 national environmental laws, from all the continents and cases bordering on liability and compensation have been considered and reviewed (a list of the instruments and cases considered are at the end of this Section). Interestingly only few of the instruments made an attempt to address in detail many of the following issues:

- What constitutes damage;
- What activities can be classified as damage prone;
- Types of damages that may occur (damage to natural resources, human health, property etc);
- Who is liable apart from the identified operator (tier liability);
- What constitutes compensation (fiscal, relocation, restoration etc);
- What constitutes reasonable compensation;

- What is the scope and duration of liability; and
- By what means can the liability be dispensed (fines, imprisonment, bearing the cost for restoration, compensation etc)?

This work attempts to provide answers to the above questions by drawing from existing instruments and where no answer is found or existing provisions are inadequate to address damage issues, make recommendations. The work is organized in 2 parts: Part A providing a brief summary and overview of the content and conclusions made in the whole document. Part B contains 9 Chapters. Chapter 2 a list of working definitions for terms commonly used in existing agreements. Chapter 3 outlines UNEP's mandate and summarizes identified global, regional, and national instruments containing liability and compensation regimes. Chapter 4 summarizes the relevant case law in this area. Chapter 5 summarizes identified global and regional agreements that refer to issues of liability and compensation but do not establish specific liability regulations. Chapter 6 outlines draft agreements from various working groups currently focusing on liability and compensation. Chapter 7 contains a synopsis and a general assessment of the common features and trends found in existing instruments. Chapter 8 outlines gaps in the current system and includes considerations for future action. Lastly, Chapter 9 provides the outcome and recommendations made by experts in a meeting organized by UNEP in May 2002 to review this analysis on liability and compensation regimes related to environmental damage.

2. IDENTIFIED ISSUES AND GAPS:

2.1 Recognition of environmental damage

Most of the instruments considered did not distinguish between damages to the environment and the traditional forms of damages i.e. damage to person or to property. Many of the earlier agreements and national laws only consider damage in terms of property and health (or traditional damage) and exclude environmental damage all together.

Examples of national legislation that recognize pure environmental damages include the *US Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)*, the *US Oil Pollution Act of 1990 (OPA)* and the *Nepal Environmental Protection Act of 1997*. The *1992 United Nations Conference on Environment and Development (UNCED)* followed by the *1993 Lugano Convention* are widely seen as the origins of provisions for pure environmental damage at the international level.

It is important to note that although the other instruments studied did not explicitly provide for pure environmental damages, provisions were made in some regimes for clean-up and restoration costs. Under the *1969 CLC and 1971 Fund* conventions as amended by the 1992 Protocols, for example, costs for emergency response, clean-up, assessment, reinstatement measures and monitoring can be admissible claims for compensation.

2.2 Threshold at which environmental damage entails liability

We are unable to identify a general consensus or consistency at an international level as to the extent of damage required for an operator to incur liability. The instruments considered and case law used phrases such as "significant" (*1992 UNECE Watercourse Convention*, art.), "serious" (*1992 UNECE Industrial Accidents Convention*, art. 1(d)), "above tolerable levels," "in excess of the prescribed standard," or "serious consequence" to achieve this purpose.

This approach provides for a *de minimis* rule, which allows for the discarding of tolerated, minor or transitory damage, and only includes the damage above the defined threshold or significance. This approach further raises the question of who determines the seriousness of the damage in each case and the yardstick for such determination.

Instruments that deal with environmental damage by allowing clean-up and restoration costs, on the

other hand, have been able to avoid the threshold issue altogether by evaluating each response project on its technical merits (*1992 CLC/Fund*). This approach facilitates the implementation of technically reasonable measures without the need for first proving some level of ecological "significance".

2.3 Persons liable or channeling liability

Most of the instruments considered are consistent with the polluter pays principle (PPP) in identifying the "operator" or "owner" as liable for environmental damages. The PPP recognizes the key position of the operator or owner to take preventive steps to eliminate or reduce the risk of damage, and thus 'internalize' the environmental costs derived from those activities. Some of the instruments also provide for a third party liability i.e. insurance companies (*1963 Vienna Convention*, art. 2 (7), *1992 CLC*).

Operators and owners have also been defined to include;

- Persons 'exercising control' over a dangerous activity, (Art. 2(5) of the 1993 *Lugano Convention*).
- Persons 'in charge' of the activity. (Art 1(e) of the 1992 *UN/ECE Industrial Accidents Convention*.)
- States in which a dangerous activity takes place (e.g. in the case of a nuclear installation) or Art. 1(a),(c) of the 1963 *Vienna Convention*).

The *U.S.A.'s CERCLA* has the broadest scope for imposing liability. Under the Act, "potentially responsible parties" (or PRPs) include: current owners and operators of a facility, owners and operators of a facility at the time the hazardous substances were disposed of, persons arranging for transport and disposal of hazardous substances, and transporters of hazardous substances. The implication is therefore that operators, owners and others involved will be jointly or severally liable thereby providing a plaintiff in the case with the option to seek out the perpetuator with the deepest pockets to pay the compensation.

Regimes differ in the degree to which the liability is 'channeled' or focused on one party, for example, the owner. Under the *1992 CLC and Fund Conventions*

liability is explicitly focused on the shipowner (and his insurer), thereby adding great clarity to the case of an incident.

2.4 Burden of proof/type of liability

The instruments considered mostly addressed the issue of civil liability (the traditional concept of personal injury and damage to property) with limited reference to State liability ('common good' concept of environmental damage per se).

With regards to civil liability, the instruments recognize three types of liability, namely, fault liability (based upon intention or negligence), strict liability (prima facie responsibility with defenses available) and absolute liability (responsibility with no mode of exculpation). Almost all the current regimes impose strict liability for environmental damage. The advantage of imposing strict liability for damages include:

1. Preventing damage in the first place: Because compensation can be expensive operators will try to avoid environmentally unsound economic actions that can add to the costs in the running of their business;
2. Quick response time to minimize environmental damage: Because strictly liable operators know from the start that they must pay compensation, they will always have incentive to respond quickly to an incident and keep damage to a minimum
3. Speeding payment of compensation: victims and responders will receive compensation more promptly under a system of strict liability because there is much less need for litigation as it will be much less likely that the potential plaintiff will need to establish a nexus between the activity and the damage caused.

On the issue of State liability, the 1972 *Space Objects Convention* and 1988 *CRAMRA* holds States liable for damages, also State liability is implicit in the 1963 *Vienna Convention* which defines "persons" to include both individuals and/or States. However, state liability remains a mucky issue.

2.5 Access to Justice

The question of who claims for the environment

where it is damaged by an operator's activity is a source of concern considering that *locus standi* is a vital element for justice. Under international law, a direct legal interest is required for the affected party to be entitled to make an environmental claim and demand the termination of an activity causing damage.

The 1998 *Aarhus Convention*, in article 9, requested Parties to ensure that members of the public having "a sufficient interest" have access to justice. Whilst under the U.S.A. *CERCLA* and *OPA*, public trustees are designated to act on behalf of the public interest to recover for natural resource damages; Claims for personal injury, damage to private property, or commercial losses, on the other hand, are handled in the standard civil system. The advantages of the public trustee system with integrated public review and comment are that: (1) that it allows government to undertake one of its standard roles, that of protecting the public interest, and (2) it allows for the creation of agencies with the high level of technical expertise necessary to undertake meaningful restoration planning and implementation.

A recent and comprehensive approach to this issue has been enacted by the Governing Council of the United Nations Compensation Commission. The Council has adopted a comprehensive approach towards addressing the issue. The approach permits submission of consolidated claims and receive payments on behalf of individuals affected, including claims on behalf of third parties¹. The Commission itself may also intervene as a trustee on behalf of certain categories of claimants.²

Aside from issues of standing, access to justice also denotes the expeditious and equal access to domestic courts and remedies on a non-discriminatory basis. Clauses addressing these issues are included in a number of Conventions, such as, 1999 *Basel Protocol*, art. 8(1) in the 1998 *Aarhus Convention*.

2.6 Available defenses or Exemptions from Liability

The generally recognized defenses open to an operator in the event of damage to the environment resulting from his activities are traditionally in three-fold namely:

- (i) Natural disasters or acts of God, which are often qualified as natural phenomenon of "exceptional, inevitable or

¹ U.N. Doc. S/AC.216/1991/1, Aug. 2, 1991

² UN.DocS/AC.26/1991/5, Oct. 23, 1991

irresistible character," [1963 Vienna Convention, art. IV(3)(b); 1969 CLC, art. III(2) (a); 1977 Seabed Mineral Resources, art. 3(3); 1988 CRAMRA, art. 8(4); 1989 CRTD, art. 5(4)(a); 1993 Lugano, art. 8(a); 1996 HNS, art. 7(2)(a); 1999 Basel Protocol, art. 4 (5) (b)];

- (ii) War or hostilities, [1963 Vienna Convention, art. IV (3) (a); 1969 CLC, art. III (2) (a) ; 1971 FUND, art. 4 (2) (a); 1977 Seabed Mineral Resources, art. 3 (3); 1988 CRAMRA, art. 8 (4); 1989 CRTD, art. 5(4)(a); 1993 Lugano, art. 8(a); 1996 HNS, art. 7 (2) (a); 1999 Basel Protocol, art. 4(5)(a); also note that war and hostilities usually also includes armed conflict, civil war and insurrection].
- (iii) Intentional or grossly negligent acts or omissions of a third party, [1969 CLC, art. 3(2)(b); 1989 CRTD, art. 5(4)(b); 1993 Lugano, art. 8(b); 1996 HNS, art. 7(2)(b); 1999 Basel Protocol, art. 4(5)(d)].

A recent addition to that list of defense can be found in the 1993 Lugano Convention. The Convention exempts damages resulting from compliance with a specific order or compulsory measure of a public authority, [Art. 8(c); 1999 Basel Protocol, art. 4(5)(c)], damages caused by pollution at tolerable levels under local relevant circumstances, and damages, caused by a dangerous activity taken lawfully in the interests of the person who suffered the damage. [1993 Lugano Convention, art. 8(d), (e)].

2.7 Financial limitations of liability

Most conventions, especially those that have created additional funds, have caps on the amount of compensation payable for a particular incident. Since most regimes are based on strict liability and thus do not require proof of fault, there is a need to provide a framework for legal certainty. The reasoning is that if strict liability is left open-ended this may open the floodgates for unlimited monetary claims resulting in serious financial burdens, excessive costs and the discouragement of investments or economic efficiency. This need for legal certainty and economic considerations has been resolved by establishing a cap on the amount of compensation available in most regimes. The unit of account used is usually the Special Drawing Right (SDR) which is set by the International Monetary Fund. For instance, the 1996 HNS Convention is set at 250 million SDR, with a maximum limit on the shipowner of 100 million SDR (the rest is then supplemented by the HNS fund art. 9). Under the 1992 CLC the maximum ship owner's liability currently ranges between approximately 3 and 59.7 million SDR, depending on ship tonnage.

Through the use of tacit amendment procedures, these limits have been raised by approximately 50% with effect 1 November 2003. The 1976 LLMC sets limits in amount based on ship tonnage. In the 1977 Seabed Mineral Resources Convention, the operator's liability is limited to 30 million SDRs, unless the damage is caused by a deliberate act, then the limit is abolished (Art 6). The nuclear conventions likewise have limits on liability. The 1997 Vienna Protocol (not yet in force) raises the possible limit of an operator's to not less than 300 million SDRs, and the supplementary fund caps the total amount of liability at 600 million SDRs [1997 Vienna Protocol, art. V; 1997 CSC, art. IV]. It should be noted that a general condition is that the operator cannot avail itself of a limitation of liability if the harm is caused by an act or omission of the operator done with intent to cause harm, or due to reckless conduct of which the operator could have known that damage would probably result. [1969 CLC, art. V (2); 1977 Seabed Mineral Resources, art. 6(4); 1989 CRTD, art. 10(1); 1996 HNS, art. 9(2)].

The conventions above which establish a Fund to supplement the amount of compensation payable by the operator's or owner's insurance can greatly increase the available amount of compensation funds. In such cases the Fund will pick up where the liability of operators end thus ensuring the full payment of compensation. In this way, full compensation is provided with a predictable financial commitment of each tier or segment. It is important to note that adding a fund does not produce a situation of unlimited compensation funds and certainly not of "unlimited liability". The amount of funds may be so great as to cover all cases, but it is still finite.

Overall, it may be impossible to establish a single ceiling for financial responsibility for all types of environmental damage, since the magnitude of the harm will depend on the nature of the activity which has caused the harm. For example, activities involving nuclear materials have the potential to pose incalculable risks for compensation claims, whereas the potential for damage resulting from the transport of hazardous material may be more localized. In this sense, a sector-by-sector approach may be required with respect to financial limitations of liability.

2.8 Time Limitations

Although an operator is liable for environmental damages resulting from his activities, his liability could be negated by lapse of time, consequently persons affected by any damages are required by law to proceed against such operator within a specified time.

The overall length of time within which an action must be brought varies from convention to

convention most with regard to the form of damage or the activity leading to it. From the instruments considered herein, the time limitation ranges from 1 year under the 1972 *Space Objects Convention* [Art. X (1)] to 30 years under the 1993 *Lugano Convention*.

It should be stressed that this time period is distinct from the period during which a victim should be permitted to bring a claim after the discovery of the harm and the identification of the source of the harm. With respect to this time limit, the consensus seems to exist that this should be a period of three years. [(1969 *CLC*, 1989 *CRTD*, 1993 *Lugano Convention*, 1996 *HNS*)]. The only exceptions being the 1977 *Seabed Mineral Resources Convention* (only 12 months) (Art. 10), the 1960 *Paris Convention* (2 years) (Art. 8), and the 1999 *Basel Protocol* (5 years) (Art. 13 (2)).

2.9 Financial security

To be able to cover the risk of liability, most civil liability regimes require the operator to establish financial security, [1960 *Paris Convention*, art. 10(a); 1969 *CLC Convention*, art. VII(1); 1977 *Seabed Mineral Resources*, art. 8(1); 1989 *CRTD*, art. 13(1); 1993 *Lugano Convention*, art. 12; 1996 *HNS*, art. 12(1); 1999 *Basel Protocol*, art. 14(1)], and this is most commonly done by purchasing insurance. The chief advantage of a compulsory insurance regime is the certainty that is provided that victims will receive compensation, even if the operator is undercapitalized or becomes bankrupt. An objection to having a regime based on compulsory insurance is that this could reduce the incentive for potential perpetrators to avoid causing damage, a situation known as 'moral hazard'. A potential problem may be that insurers will shy away from general, compulsory insurance for every potential type of environmental damage to counteract this effect, insurance companies may demand upper limit premiums and/or significant damage thresholds in order to restrict their own financial risk.

2.10 Creation of funds

Funds are a reasonable way of topping up insurance. They provide an additional tier of protection beyond that of the operator or shipowner for compensating victims or remedying damage which might not otherwise be covered by a liability system. These schemes have been developed and proposed to compensate victims: (1) if the operator cannot be held liable due to exonerations, contributory negligence, time limits or financial limits; (2) if the operator is financially incapable to meet his liability up to the financial limit; (3) if the total amount of harm exceeds the financial limit; and/or (4) to provide relief on an interim basis. Contribution mechanisms for the funds typically target the sector, industry or

government, that benefits most from the hazardous activity. Such funds are commonly found in regimes pertaining to nuclear safety [1997 *CSC*], oil pollution [1971 and 1992 *FUND Conventions*], and transport [1996 *HNS*]. The 1997 *CSC* provides for a third tier of compensation, based on contributions from Contracting Parties. The 1992 *Fund* is currently in the process of creating a third tier of compensation for countries desiring even more coverage than is presently available. There are no provisions related to the establishment of funds in the 1972 *Space Objects Convention*, 1989 *CRTD*, 1993 *Lugano Convention*, or the 1999 *Basel Protocol*, although in the case of the *Basel Protocol* there are on going informal negotiations on this issue.

2.11 Jurisdiction

This refers to where a claim for compensation may be brought. International regimes generally provide the criteria to establish jurisdiction in cases involving multinational aspects. For instance, the jurisdiction for the nuclear conventions is vested in the domestic (national) courts of the State where the incident has occurred [(1960 *Paris*, art. 13(a); 1963 *Vienna*, art. XI(1); 1977 *Seabed Mineral Resources Convention*, art. 11(1)], whereas for 1969 *CLC* and 1996 *HNS* authority is vested in the domestic courts of the affected state [1969 *CLC* as amended by the 1992 *Protocol*, art IX(1); 1996 *HNS*, art. 38 (1)]. The 1989 *CRTD*, 1993 *Lugano Convention*, and 1999 *Basel Protocol* offer a choice between the courts of the state where the pollution occurred or those of the affected state [1989 *CRTD*, art. 19 (1); 1993 *Lugano*, art. 19; 1999 *Basel Protocol*, art. 8]. Issues in this area that need further clarification include: the international jurisdiction of courts, the reciprocal recognition and enforcement of judgments of courts or tribunals, and an expeditious procedure for securing the enforcement of judgements and court settlements. Questions of concurrent jurisdiction and forum-shopping should also be taken into account in this context in order to prevent abuse.

2.12 Reparation for damage

In environmental damage cases, the victim is likely to seek financial reparation to cover a variety of costs arising from the material damage to environmental resources. These may include lost income or costs related to emergency response, clean-up, impact studies, restoration, or monitoring. Problems arise with the concept of pure environmental damage, however, because it does not fit easily with the traditional approaches of civil liability. These are designed to compensate an injured person by requiring the responsible person to pay the economic costs of resulting damage. Pure environmental damage, on the other hand, may be incapable of

calculation in economic terms. An accepted solution to this problem is to link liability for harm to the environment to the payment of the reasonable costs of restoration measures, reinstatement measures or preventative measures [1989 CRTD, art. 10 (c), (d); 1993 Lugano Convention, art. 2 (7) (c), (d); 1996 HNS, art. 1 (6) (c),(d); 1997 Vienna Protocol, art. I (k) (iv), (v), (vi), (m), (n), (o); 1999 Basel Protocol, art. 2 (2) (c) (iii), (iv), (v)].

The result of this approach of limiting compensation to "reasonable" restoration measures that can actually be carried out and are therefore quantified is that the operator may be exposed to less liability due to the fewer the number of available, feasible measures. In cases where few restoration measures are available the question arises whether the operator can be required to pay some other form of compensation for harm to the environment. Determining the adequate level of payment remains the main stumbling block in such situations.

On occasions, however, damage will be irreparable because of physical, technical or economic reasons and, therefore, restoration will be impossible. An argument can be made that if environmental damage is irreparable or unquantifiable it should not result in an exemption from compensation. Accordingly, an entity which causes environmental damage of an irreparable nature should not end up in a more favorable condition than if the damages were restorable. (*Strasbourg resolution*, art. 25). One way to avoid such a distortion of incentives would be to see to it that polluters pay compensation equal to the value of the damaged resource. In cases that involve environmental resources that are traded in a market the approach is straight-forward: simply use the price that the environmental resource commands in the market (*Trail Smelter Case*). For some environmental resources the approach taken has been to estimate the economic value attached to the non-market use of the resources, for example, recreational use. This is usually attempted using travel costs methods (relying on expenditures made by an individual to visit and enjoy a resource), or a hedonic pricing method (which takes the extra market value enjoyed by private property with certain environmental amenities). For the pure environmental damages themselves the only methods theoretically available are the highly controversial 'contingent valuation methods'. These use public opinion surveys to estimate value by measuring the willingness of individuals to pay for environmental goods such as

clean air or water or the preservation of endangered species. It should be pointed out, however, that these methods, first proposed in US environmental law, are far from developed and, to date have not been successfully used in US courts to determine environmental damages. While there is some debate among experts as to their future potential, most economists agree that public survey methods are very expensive, time consuming and require high-level experts in order to implement.

In most cases full reparation of environmental damage should not result in the assessment of excessive, exorbitant, exemplary or punitive damages. Punitive damages are not usually accepted under international law, but where it would be equitable for compensation to exceed actual loss or some other alternative measurement, punitive damages might be envisaged. Deliberate environmental damage might be a case in point.

2.13 Recommendations for action:

Based on the overall assessment of this study, the following recommendations are made to strengthen the current network of agreements on civil liability and compensation and to make new agreements effective in their environmental objectives:

1. There is a need to widen the scope of liability and compensation coverage, possibly into the following areas: damage with non-transboundary effects, damage derived from normal operations, and damage from low-risk activities and substances.
2. There is a need to look at present conventions and regimes and assess such questions as: (a) why states have been reluctant to address "state liability", (b) whether there is scope to add liability and compensation to the Regional Seas Agreements, and, most importantly, (c) why so few agreements have entered into force.
3. In order to maximise potential for success in future regimes there is a need to study the various features of any liability and compensation regime, including: inclusion of compensation for restoration costs and preventive measures, efficient linkage with

economic instruments, access to justice and information, liability defences, time limitations, jurisdiction, as well as liability thresholds and limits.

4. There is a need to study available options for the development of possible tools, including options for non-binding or legally binding instruments, within the framework of UNEP, and some of which have been considered by the EU, including:
 - Using international legal instruments in force which are of relevance to civil liability for environmental damage.
 - Evaluating the relevant agreements already in force and considering whether they should be

amended to address questions of civil liability for environmental damage.

- Promoting the entry into force of existing international agreements containing provisions which already cover civil liability for environmental damage, and identifying the reasons why they have not yet entered into force. The possibility of adjustments or amendments might be considered.
- Developing a new international agreement (treaty/protocol) providing for civil liability for environmental damage.
- Developing a code of conduct, guidelines or recommendations concerning liability for environmental damage.

**MAIN PAPER (LIABILITY AND COMPENSATION
REGIMES RELATING TO ENVIRONMENTAL
DAMAGE)**

**B. LIABILITY AND COMPENSATION REGIMES
RELATED TO ENVIRONMENTAL DAMAGE**

1. INTRODUCTION

Currently there are numerous global and regional agreements addressing the concepts of liability and compensation in relation to environmental damage. Most of these conventions and protocols have been developed under the auspices of various international organizations³ and are mostly limited to specific areas and discrete issues. These regimes mainly arise in relation to nuclear activities, oil pollution and the marine environment, the transport of hazardous substances and wastes, and space objects. Notwithstanding the existence of several agreements related to liability and compensation for environmental damage many areas still need clarification, such as, the definition of environmental damage, the threshold at which damage entails liability, the concept of State liability for environmental damage, and the nature of reparation to mention but a few.

This document has been prepared to gather, assess, and identify gaps with regards to compensation and liability regimes at international, regional, and national levels that relate to environmental damage. The initial draft of this document was reviewed by a group of experts which met, in their personal capacities, in Geneva between 13-15 May 2002 and made useful comments and recommendations. The document has accordingly been revised and updated to reflect and incorporate the suggestion made as well as updated taking into account further developments in the field. The experts also identified

and recommended priority issues as well as gaps which UNEP should focus on its future work in environmental liability and compensation regimes. Specific types of activities to be evaluated and assessed to determine the best possible course of action for UNEP to deal with were recommended and considered.

The document is organized in 9 Chapters: Chapter 2 contains a list of working definitions for terms commonly used in existing agreements. Chapter 3 outlines UNEP's mandate and summarizes identified global, regional, and national instruments containing liability and compensation regimes. Chapter 4 summarizes the relevant case law in this area. Chapter 5 summarizes identified global and regional agreements that refer to issues of liability and compensation but do not establish specific liability regulations. Chapter 6 outlines draft agreements from various working groups currently focusing on liability and compensation. Chapter 7 contains a synopsis and a general assessment of the common features and trends found in existing instruments. Chapter 8 outlines gaps in the current system and includes considerations for future action. Lastly, Chapter 9 provides the outcome and recommendations made by experts in a meeting organized by UNEP in May 2002 to review this analysis on liability and compensation regimes related to environmental damage.

³ Organizations such as the United Nations (UN), the United Nations Economic Commission for Europe (UNECE), the International Maritime Organization (IMO), the International Atomic Energy Agency (IAEA), and the Organization for Economic Cooperation and Development (OECD) are examples, but this list is not meant to be exhaustive.

2. WORKING DEFINITION

Definitions are a necessary first step to understanding the current liability and compensation regimes. This section includes definitions for terms related to liability and damage as well as definitions for the underlying principles of compensation and liability, namely the polluter pays principle and precautionary principle.

In general, concepts of liability and compensation stem from the principles of **tort law**, in which a wrongful act causing injury permits the injured party to obtain compensation, usually in the form of damages, by way of a **civil or private action** against the person who caused the injury. In this sense, civil liability differs from state liability in that **civil liability** creates a relationship between the person liable and the person injured by conduct for which he/she is held responsible, whereas **state liability** creates a relationship between the state perpetrator of the internationally wrongful act and the nationals and permanent residents of the injured state. In other words, in the case of state liability, it is the state rather than the private individual who is liable due to some violation of an international legal obligation established by treaty or by rule of customary international law.⁴ These concepts are not to be confused with **environmental liability**, which is the generic term that refers to the way and the means of forcing major polluters to repair the damage that they have caused, or to pay for those repairs.⁵ It is usually based on a general obligation to prevent environmental damage, to restore the environment when and where damage occurs, and to compensate if the damage is irreversible.

The general idea that the injurious consequences of harm should be shifted to the source of the harm finds support in two basic principles found in environmental law, namely the polluter-pays principle and the precautionary principle. The **polluter-pays principle** simply means that the polluter should bear the cost of preventing damage to the environment. The object of this principle is to channel the costs of prevention and reparation of environmental damage to the person who is in the

best position to prevent such damage and thus 'internalize' the costs of pollution damage.⁶ A second key concept is the **precautionary principle**, which applies to environmental decision-making where there is scientific uncertainty. This principle requires that where there are threats of damage to the environment, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation.⁷

For the purposes of this paper, the type of damage that we are primarily concerned with is **environmental damage**. This should not be confused with **traditional damage** which denotes injury or loss to persons or property. This is often included in agreements but as a separate head of damage from environmental damage. To date, there is still no general consensus as to a definition of environmental damage in international law. In 1998, a UNEP Working Group of Experts on Liability and Compensation for Environmental Damage⁸ completed an extensive review of international, regional, and state legislation and practice to develop a general working definition of this term. According to this working group, **environmental damage** is a change that has a measurable adverse impact on the quality of a particular environment or any of its components, including its use and non-use values, and its ability to support and sustain an acceptable quality of life and a viable ecological balance. In this sense, environmental damage does not include damage to persons or property, although such damage could be consequential to the damage caused to the environment. It should also be noted that terms such as **pollution** or **adverse effects** simply describe the threshold beyond which environmental damage may entail liability, and are not synonymous with environmental damage.

In relation to the level of initial responsibility placed on the polluter, regimes vary from fault-based to absolute liability. **Strict liability** with limited defences is the most common form and means that liability is imposed irrespective of fault or negligence.

⁴ Lefeber, R. *Transboundary Environmental Interference and the Origin of State Liability*. Kluwer Law International, 1996 at 15.

⁵ European Environmental Bureau. *Environmental Liability in Europe: Concerning the Need for a European Directive on Environmental Liability*. 1997. Chapter 1. www.eeb.org/archive/liabilityuk.htm.

⁶ *Ibid.*

⁷ Vicuna, F.C. "Final Report Prepared for the Eighth Committee of the Institute of International Law By the Rapporteur on the Subject of Environmental Responsibility and Liability." 1998. *The Georgetown International Environmental Law Review* 10(2): 279 - 308.

⁸ *Liability and Compensation for Environmental Damage: Compilation of Documents*, United Nations Environment Programme. Nairobi, 1998.

In other words, it is not a matter of whether the perpetrator behaved correctly or incorrectly, but that the damage occurred that is the decisive factor.⁹ In this way, strict liability lessens the burden of proof on a potential plaintiff, in that they do not need to prove intent or negligence only damage to establish liability. However, strict liability does allow some defenses so that a person may be exonerated from liability if the damage was caused, for instance, by an act of God (or natural disaster), an act of war, or by the interference of a third party. **Absolute liability** is also liability irrespective of fault, but available defenses will be few apart from an act of God. This type of liability is often imposed for what are deemed ultra-hazardous activities, such as nuclear installations. In contrast, **fault liability** means that the plaintiff must prove that the perpetrator acted with intent or that he/she acted negligently or without due care. For this reason, fault liability is rarely imposed since it places a difficult burden of proof on the potential plaintiff rather than on the alleged perpetrator.¹⁰

In imposing liability, it is often stated that liability is channeled to a specific person, such as the operator or owner. **Channeling liability** means that that one person is solely liable, and no action can be brought against any other person for the damage caused. It is sometimes the case that the owners or operators will be **jointly and severally liable**, literally meaning that they can be held responsible for the damage caused together or individually. This means that a person can bring an action against either all or only one of the perpetrators for the full costs of clean-up regardless of their proportional contribution to the overall contamination.¹¹ This gives the plaintiff a wide choice of parties to pursue and allows them to proceed selectively against those perpetrators whom they have the best case and who have the substantial resources to pay for remediation and compensation. The main disadvantage of joint and several liability is that widening the circle of parties who may pay compensation weakens the incentive mechanisms which keep potential polluters diligent.

⁹ See European Environmental Bureau, *supra* note 5.

¹⁰ Vicuna, *supra* note 7.

¹¹ European Environmental Bureau, *supra* note 5.

3. AGREEMENTS COVERING LIABILITY AND COMPENSATION REGIMES

Over the years, multilateral environmental agreements (MEAs) have become increasingly important in international environmental management, forming the basis for domestic national laws as effective means for the protection of environmental integrity. This section covers both soft and hard law instruments that specifically address issues of liability and compensation relating to environmental damage. Some of the issues commonly referred to in these agreements include:

- The scope of application and/or the activities covered;
- A definition of damage and the threshold at which liability is imposed;
- An indication of the person's liable and/or channeling liability;
- The burden of proof and/or type of liability imposed;
- Available defenses or exoneration from liability;
- Access to justice and/or who may bring forth a claim for compensation;
- Financial limitations of liability;
- Time limitations for bringing forth a claim for compensation;
- Insurance and other financial guarantees;
- The creation of funds;
- Enforcement of liability and/or jurisdiction; and
- Reparation for damage.

3.1 Soft Law Instruments on Liability and Compensation:

A number of soft law principles that are derived from various United Nations declarations and resolutions deal with issues related to liability and compensation for environmental damage. The "soft law" instruments are not only complementary to legal rules, but their importance also lies in the fact that some of the principles may be said to reflect rules of international law, while others point to the direction of future developments.

1. **1972 Stockholm Declaration** (Stockholm Declaration of the United Nations Conference on the Human Environment); June 16, 1972.

Two principles from this Declaration deal with liability in the context of the environment. Principle 21 outlines that States have a general responsibility to ensure that activities within their jurisdiction do not cause damage to the environment of other States, and in Principle 22, States agreed to "cooperate to develop further the international law regarding liability and compensation for victims of pollution and other environmental damage."

2. **1992 Rio Declaration** (Rio Declaration on Environment and Development); June 14, 1992.

The Stockholm Principles were reaffirmed in 1992 during the United Nations Conference on Environment and Development (UNCED) in Principles 2 and 13 of the Rio Declaration. Principle 2 reiterates Principle 21 of the Stockholm Declaration, and in Principle 13 States agreed to "develop national law regarding liability and compensation for the victims of pollution and other environmental damage...and to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control..."

3. **1991 Resolution 687** (United Nations Security Council's Resolution 687, paragraph 16)

This Resolution reaffirmed that "Iraq...is liable under international law for any direct loss, damage including environmental damage and the depletion of natural resources...as a result of [its] unlawful invasion and occupation of Kuwait." This resolution is significant for two reasons. First, it marked the first time the Security Council explicitly addressed environmental issues, and as such, it has acted as a catalyst for the further consideration of the various complex issues associated with liability for environmental damage. Secondly, this resolution provided for the establishment of a Fund to pay compensation for claims and for a Commission, known as the United Nations Compensation Commission (UNCC), to administer this Fund.¹²

The UNCC is a subsidiary organ of the United Nations Security Council. It is not a court or an arbitral tribunal before which the parties appear, but is a political organ that performs a fact-finding

¹² See www.unog.ch/uncc/start.htm; see also generally Sands, P. "Liability for Environmental Damage." In *UNEP's New Way Forward: Environmental Law and Sustainable Development*. Page 73-95 United Nations Environment Programme, 1995.

function of examining claims, verifying their validity, evaluating losses, assessing payments and resolving disputed claims. It is only in this last respect that a quasi-judicial function may be involved. Under the UNCC, compensation has been paid to successful claimants from a special fund that received a percentage of the proceeds from sales of Iraqi oil. Since 1991, the Commission has received approximately 2.6 million claims seeking compensation in excess of US\$300 billion. The UNCC has accepted claims from individuals, corporations and Governments, as well as those submitted by international organizations for individuals who were not in a position to have their claims filed by a Government.¹³

4. **1997 Strasbourg Resolution** (Resolution on the Responsibility and Liability under International Law for Environmental Damage); adopted 4 September 1997.

The Institut de Droit International (IDI) recently adopted in September 1997, a resolution on international responsibility and liability for environmental damage, acknowledging that States are responsible for environmental harm through a breach of obligation established under international law. It recommends that a State establish international and civil liability for operators based on strict liability with maximum limits and financial security schemes for compensation, reparation of environmental damage, and equal access to domestic courts. The Resolution also addresses the preventive functions of liability such as the need for notification and consultation, regular exchanges of information and the increased utilization of environmental impact assessments.

5. **2000 Malmo Declaration** adopted by the Ministers of Environment on 31 May 2000. It recognized, among the major environmental challenges of the 21st Century, at para 3 to be "the central importance of environmental compliance, enforcement and liability"
6. **2001 Montevideo Programme III** (The Programme for the Development and Periodic Review of Environment Law for the First Decade of the Twenty-First Century as approved and adopted by Decision 21/23 of the 21st session of the UNEP Governing Council in February 2001).

The Montevideo Programme sets out a broad strategy for the activities of UNEP in the field of environmental law for the twenty-first century. Montevideo III was launched in February 2001 and

expressly renews UNEP's commitment to addressing issues of liability and compensation for environmental damage. Specifically, under Article 3 the "Prevention and Mitigation of Environmental Damage," UNEP is required to:

- (a) Promote, where appropriate, efforts by States to develop and adopt minimum international standards at high levels of protection and best practice standards for the prevention and mitigation of environmental damage;
- (b) Conduct studies, with the consent and cooperation of the States concerned, on the effectiveness of existing regimes of civil liability as a means of preventing environmentally harmful activities and mitigation of environmental damage, and provide expertise to States to enhance the effectiveness of such regimes;
- (c) Conduct studies, with the consent and cooperation of the States concerned, on the adequacy and effectiveness of ways and means of providing compensation, remediation, replacement and restoration for environmental damage, including methods of valuation, and encourage efforts by States to develop and adopt standard environmental economic valuation tools and techniques for such valuation;
- (d) Support the development by States of processes and procedures for victims or potential victims of environmentally harmful activities, regardless of their nationality, to:
 - (i) Ensure appropriate access to justice; and
 - (ii) Provide appropriate redress, including the possibility of compensation, inter alia, through insurance and compensation funds; and
- (e) Promote collaboration among governments, international organizations and civil society in strengthening regimes for prevention and mitigation of environmental damage.

3.2 Identified Global Regimes

1. **1963 Vienna Convention (IAEA Convention on Civil Liability for Nuclear Damage)**; adopted 29 May 1963, in force on 12 November 1977.

The International Atomic Energy Agency¹⁴ (IAEA)'s third party liability regime has been established to

¹³ *Ibid.*

¹⁴ See www.iaea.org/worldatom

provide financial protection against damage resulting from the peaceful uses of nuclear energy. At the time of its conception, the regulatory goal of this regime was to relieve the nuclear supply industry of the incalculable risks posed by high compensation claims.¹⁵

The Convention is unique in that it defines "persons" to include both individuals and States, and nuclear damage to include the loss of life, personal injury, and damage to property (or traditional damage only). Under the Convention, the operator of the nuclear installation is absolutely liable for damage caused by a nuclear incident, and is required to maintain insurance. Liability is channeled to the operator although direct action may also lie with the insurer. The operator will be exonerated from liability if the nuclear incident was due to an act of armed conflict or war, by the gross negligence of the person suffering the damage, or from an act or omission of such person done with the intent to cause damage. Liability is limited to US\$5 million per nuclear incident, which is based on the price of gold in 1963. The time limit to bring forth a claim of compensation is also limited. The rights of compensation are extinguished if an action is not brought within 10 years from the date of the nuclear incident. National law may establish a shorter time but this cannot be less than 3 years from the date the claimant knew or ought to have known of the damage and the identity of the operator. With respect to an action, jurisdiction lies exclusively with the courts of the contracting party in whose territory the incident occurred.

2. *1969 CLC as amended by 1992 Protocol (International Convention on Civil Liability for Oil Pollution Damage (Brussels)); adopted 29 November 1969, in force on 19 May 1975. This was amended by the Protocols of 1976 and 1992; the 1992 Protocol came into force on 30 May 1996.*

Created under the auspices of the International Maritime Organization (IMO),¹⁶ this Convention was adopted in 1969 in response to the "Torrey Canyon" oil spill disaster of 1967,¹⁷ as a regime to guarantee the payment of compensation by shipowners for oil pollution damage. The objective is not only to ensure that adequate compensation is available to persons who suffer damage caused by oil pollution, but also to standardize international rules and procedures for determining questions of liability and adequate compensation in such areas.

The Convention places the liability for such damage on the owner of the ship from which the polluting oil escaped or was discharged. The shipowner is strictly liable unless the incident is caused by war, a natural phenomenon of exceptional character, a malicious act of a third party, or through the negligence of the government. It does not apply to warships or other vessels owned or operated by the state that are used for non-commercial purposes, but does apply to ships owned by a state and used for commercial purposes.

The 1992 *Protocol* widens the scope of the convention to cover pollution damage in the exclusive economic zone (EEZ), and extended the convention to cover spills from sea-going vessels constructed or adapted to carry oil in bulk as cargo so that it applies to both laden and unladen tankers, and includes spills of bunker oil from such ships. The 1992 *Protocol* also further limits liability to costs incurred for reasonable measures to reinstate the environment.

Under the current rules the maximum ship owner's liability under 1992 *CLC* ranges between approximately 3 and 59.7 million SDR, depending on ship tonnage. Through the use of tacit amendment procedures, these limits have been raised by approximately 50% with effect 1 November 2003. All tankers from signatory nations are required to maintain adequate financial security. Most ship owners carry oil pollution insurance through one of the internationally known "Protection & Indemnity" Clubs (P&I) Clubs.

3. *1971 FUND as amended by 1992 Protocol (International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Brussels)); adopted on 18 December 1971, in force on 16 October 1978. This was amended by the Protocols of 1976 and 1992; the 1992 Protocol came into force on 30 May 1996.*

This Convention, also created under the auspices of IMO, ensures adequate compensation is available to persons suffering damage caused by oil pollution discharged from ships in the seldom cases where compensation under 1969 *CLC* is inadequate or can not be obtained. The International Oil Pollution Compensation (IOPC) Fund provides a second tier of compensation above that provided for in 1969

¹⁵ Gehring, T. & M. Jachtenfuchs, "Liability for Transboundary Environmental Damage: Towards a General Liability Regime." 1999, *European Journal of International Law* 14(1): 1-8.

¹⁶ See www.imo.org/

¹⁷ This accident had caused hitherto unprecedented damage in the English Channel. Since all preventive measures as well as existing liability rules for maritime transport proved to be insufficient the British government, faced with financial claims from clean-up measures and from private persons and territorial authorities suffering loss, asked the states represented in the IMO to draw consequences from the accident; see generally Gehring & Jachtenfuchs, *supra* note 15.

CLC. Payments of compensation by the 1992 Fund are financed by contributions levied on oil companies and other entities located in all 1992 Fund member states that receive crude and heavy fuel oil by sea, thus allowing a fair distribution of costs between the shipping industry and the oil cargo business. The unit of account used in the Convention is the Special Drawing Right (SDR) of the International Monetary Fund. The current limit is 135 million SDR and will be raised to 203 million SDR on 1 November, 2003.

4. **1971 NUCLEAR Convention (Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (Brussels)); adopted 17 December 1971, in force on 15 July 1975.**

The purpose of this Convention is to resolve difficulties and conflicts which arise from the simultaneous application to nuclear damage of certain maritime conventions dealing with shipowners' liability. A person otherwise liable for damage caused in a nuclear incident shall be exonerated for liability if the operator of the nuclear installation is also liable for such damage by virtue of the 1960 Paris Convention or the 1963 Vienna Convention, or national law of similar scope of protection.

5. **1972 Space Objects (Convention on International Liability for Damage Caused by Space Objects, London, Moscow, Washington 1972); adopted 29 March 1972, in force 1 September 1972.**

The objective of this Convention is to establish rules and procedures for damage caused by space objects and to ensure the prompt payment of full and equitable compensation to victims of such damage. In this Convention, the definition of damage includes the loss of life, personal injury, impairment of health and damage to property (or traditional damage only). Overall, this Convention is unique in that it is one of the only agreements that specifically addresses State liability. The launching State is absolutely liable for damage caused by its space object on the surface of the earth or to aircraft flight, and States can be jointly or severally liable. Exoneration from liability may be granted if the damage was caused by the gross negligence or from an act or omission done with intent to cause damage on the part of the Claimant State. The Convention does not apply to damage caused to nationals of the Launching State, or foreign nationals during the time they are participating in the operation of the space object from the time of launching. Lastly, the Convention imposes a time limitation for bringing forth a claim for compensation. A claim must be made within one year following the date of the occurrence of the damage or the identification of the liable Launching State.

6. **1976 LLMC (Convention on Limitation of Liability for Maritime Claims (London)); adopted on 19 November 1976, in force on 1 December 1986.**

This Convention replaced the *International Convention Relating to the Limitation of the Liability of Owners of Seagoing Ships* and raised the limit of liability up to three-hundred percent. Limitations of liability are based on tonnage and are expressed in SDR. For ships under 500 tons liability is limited to 330,000 SDR, and for larger ships this amount increases with tonnage.

7. **1988 Joint Protocol (Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention (Vienna)); adopted 21 September 1988, in force on 27 April 1992.**

This Protocol established a link between the 1963 Vienna Convention and the 1960 Paris Convention (as listed under the Regional Conventions) combining them into one expanded liability regime. Parties to the Joint Protocol are treated as though they were parties to both Conventions and a choice of law is provided to determine which of the two Conventions should apply to the exclusion of the other in respect of the same incident.

8. **1988 CRAMRA (Convention on the Regulation of Antarctic Mineral Resource Activities (Wellington)); adopted 2 June 1988, but not yet in force.**

This Convention is an integral part of the Antarctic Treaty system, the general purpose of which is to ensure that Antarctica will continue to be used exclusively for peaceful purposes. The aim of this Convention is to prohibit activities that would cause damage to the environment or ecosystems of the Antarctic. With respect to State liability, this is the only treaty which provides an explicit definition of damage to the environment. Damage is defined as any impact on the living or non-living components of that environment, including harm to atmospheric, marine or terrestrial life beyond that which is negligible.

Under Article 8 of the Convention, an operator undertaking any Antarctic mineral resource activity is strictly liable for damage to the Antarctic environment, loss or impairment to the ecosystem or to the property of the third party, and for prevention and clean-up costs to restore the status quo ante. Furthermore, a State will be liable, in accordance with international law, if damage would not have occurred if the state had carried out its obligations under the Convention. An operator will be exonerated from liability if the damage was caused by a natural disaster of exceptional character, by armed conflict, or by the intentional or negligent act or omission of the party seeking redress. It is stated

that issues relating to limits on liability, the creation of a fund or funds ensuring adequate compensation and the reimbursement of the costs of response action should be elaborated in a separate protocol.

9. **1996 HNS (International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (London)); adopted 3 May 1996, but not yet in force.**

This Convention will make it possible for up to 250 million SDR (about US\$320 million) to be paid out in compensation to victims of accidents involving the transport of hazardous and noxious substances. Damage, as defined in the Convention, includes loss of life, personal injury, loss of or damage to property outside the ship, loss or damage by contamination of the environment, and the costs of preventative measures. *The 1996 HNS* excludes pollution damage as defined in *1969 CLC* and *1971 FUND* to avoid overlap with these conventions. It also does not apply to damage caused by radioactive material or to warships or other ships owned by the state used for non-commercial service.

Under this Convention, the shipowner is strictly liable for damage and is required to have insurance and insurance certificates. This Convention also follows the two-tiered system established under the *1969 CLC* and *1971 FUND* Conventions, in which the liability of the shipowner creates the first tier of liability, which is supplemented by a second tier, the HNS fund, financed by cargo interests. However, *the 1996 HNS* goes further than either *the 1969 CLC* or *1971 FUND Conventions* to cover not only pollution damage but also the risks of fire and explosion, including loss of life, personal injury and damage to property.

As with the *1969 CLC* and *1971 FUND* Conventions, when an incident occurs where compensation is payable under the *1996 HNS* Convention, compensation would first be sought from the shipowner up to a maximum limit of 100 million SDR (US\$128 million). Once this limit is reached, compensation would be paid from the HNS fund up to a maximum of 250 million SDR. Claims must be brought within 3 years from the date when the person suffering damage knew or ought reasonably to have known of the damage and of the identity of the owner, in no case can an action be brought after 10 years. Jurisdiction for an action is based on where the damage occurred.

10. **1996 LLMC Protocol (Protocol to Amend the Limitation of Liability for Maritime Claims (London)); adopted 2 May 1996, but not yet in force.**

The 1996 Protocol, not yet in force, raises the limits of liability and therefore the amounts of compensation payable in the event of an incident under *the 1976*

LLMC Convention. Limitations of liability are based on tonnage and are expressed in SDR.

11. **1997 CSC (Convention on Supplementary Compensation for Nuclear Damage (Vienna)); adopted 12 September 1997, but not yet in force.**

The purpose of this Convention is to provide a second tier of compensation for damage resulting from a nuclear incident. Contracting Parties make available public funds with amounts calculated using a formula based on the installed nuclear capacity of the party multiplied by 300 SDRs per unit of installed capacity. The total amount available under this calculation is 600 million SDRs. These funds only apply to nuclear damage which is suffered in the territory of the Contracting Party, or in the maritime areas or EEZ of the party, and can only be used if a nuclear installation is used for peaceful purposes (not military installations). The courts of a Contracting Party have jurisdiction pursuant to either *the 1963 Vienna* or *1960 Paris Conventions*.

12. **1997 Vienna Protocol (Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage); adopted on 12 September 1997, but not yet in force.**

This Protocol extends the possible limit of the operator's liability to 300 million SDRs (about US\$400 million). It extends the geographical scope of *the 1963 Vienna Convention* to include the territory of Non-Contracting States, established maritime zones, and EEZs. It also provides for jurisdiction of coastal states over actions incurring nuclear damage during transport. Furthermore, this Protocol includes a better definition of nuclear damage that addresses the concept of environmental damage, the costs of reinstatement, preventive measures and any other economic loss. It also extends the period during which claims may be brought for loss of life and personal injury to 30 years from the date of the nuclear incident, up from 10 years in *the 1963 Vienna Convention*.

13. **1999 Basel Protocol (Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal); adopted on 10 December 1999, but not yet in force.**

Article 12 of *the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* requested the Parties to co-operate with a view to adopt, as soon as practicable, a protocol setting out rules and procedures in the field of liability and compensation for damage resulting from the transboundary movement and disposal of hazardous wastes and other wastes. *This 1999 Protocol* fulfilled this mandate. The Protocol establishes a comprehensive regime for assigning liability in the

event of an accident involving hazardous waste as well as adequate and prompt compensation for damage resulting from its transboundary movement, including incidents occurring because of illegal traffic in such materials.

Damage, as defined in the Protocol, includes traditional damage (loss of life, personal injury or damage to property), economic loss, and the costs of reinstatement and preventive measures (environmental damage). Liability is strict and the notifier or exporter is liable for damage until the disposer has taken possession of the wastes. However, fault-based liability can be imposed for intentional, reckless or negligent acts or omissions. The notifier is exonerated from liability if he/she proves that damage was the result of an armed conflict or war, a natural phenomenon of exceptional character, compliance with State law, or the intentional conduct of a third party. In any case, all transboundary hazardous waste movements must be covered by insurance.

The Protocol applies to the territories under jurisdiction of the State Parties, including any land, marine area or airspace within which a State exercises administrative and regulatory responsibility in accordance with international law in regard to the protection of human health or the environment. It applies only to damage suffered in an area under the national jurisdiction of a State Party arising from an incident as defined, as well as to areas beyond national jurisdiction and non-Contracting States of transit, provided those States afford reciprocal benefits on the basis of international agreements.

The Protocol places a cap on financial liability and the limits correspond to the units of shipment in tonnes (listed in Annex B). A working group is currently in the process of drafting financial limits of the liability under the Protocol (which is included in the drafts section of this paper). There is also a limit on the time period in which claims for compensation may be brought forward. Claims must be brought within 10 years from the date of the incident and within 5 years from the date the claimant knew or ought reasonably to have known of the damage. Claims may be brought in the courts where the damage was suffered, the incident occurred, or the residence or place of business of the defendant.

14. 2001 Bunker Oil Pollution (International Convention on Civil Liability for Bunker Oil Pollution Damage); adopted 23 March 2001, but not yet in force.

This Convention was adopted to ensure that adequate, prompt, and effective compensation is

paid to persons who suffer damage caused by oil spills when carried as fuel in ships' bunkers. It applies to damage caused in the territory of the Contracting Party, including the territorial sea and EEZs. Pollution damage includes loss or damage caused outside the ship by contamination resulting from the escape or discharge of bunker oil from the ship, and the costs of preventive measures. The Convention requires ships over 1,000 gross tonnage to maintain insurance or other financial security to cover the liability of the registered owner for pollution damage in an amount equal to the limits of liability under the applicable national or international limitation regime, but not exceeding the amounts under the 1976 LLMC, as amended. In addition, this Convention also allows for direct action against the insurer.

The Conference which adopted the Convention also adopted three resolutions, two of which are applicable to liability. First, the *Resolution on Limitation of Liability* which urges all States that have not yet done so, to ratify or accede to *the 1996 LLMC Protocol*, raising the limits of liability and therefore the amount of compensation payable in the event of an incident. Second, the *Resolution on Protection for Persons Taking Measures to Prevent or Minimize the Effects of Oil Pollution* which recommends that persons taking reasonable measures to prevent or minimize the effects of oil pollution be exempt from liability unless the liability in question resulted from their personal act or omission, committed with intent to cause damage, or recklessly and with knowledge that such damage would probably result. It also recommends that States consider the relevant provisions of *the 1996 HNS* as a model for their legislation.

3.3 Identified Regional Regimes ¹⁸

1. 1960 Paris Convention (OECD Convention on Third Party Liability in the Field of Nuclear Energy); adopted on 29 July 1960, in force on 1 April 1968. Amended by Protocols of 1964 and 1982.

The objective of this Convention is to ensure adequate and equitable compensation for persons who suffer damage caused by "nuclear incidents," which is understood to cover cases of gradual radioactive contamination, but not normal or controlled releases of radiation. The operator of the nuclear installation is absolutely liable for damage including loss of life, and damage or loss to property other than the nuclear installation itself (or traditional damage only). The limitation period to bring forth a

¹⁸ Currently all identified regimes apply only to Europe

claim is 10 years, although nations may shorten this time to a period of not less than 2 years from the date the claimant knew or ought to have known of the damage and the identity of the operator liable. Liability is limited to 15 million SDR, supplemented by the 1979 Brussels Convention. With the coming into force of the 1988 Joint Protocol most features of this Convention have been harmonized with the 1963 Vienna Convention.

2. **1963 Brussels Supplementary Convention (Supplementary Convention to the 1960 Paris Convention (Brussels)); adopted 31 January 1963, in force on 4 December 1979; amended by the Protocols of 1964 and 1982.**

This provides for a three tiered system of compensation. The first (up to a fixed limit of SDRs) comes from funds provided by insurance or other financial security of the operator. The second tier is to be provided from public funds by the Contracting State in whose territory the nuclear installation is situated. Lastly, the third tier is provided for by Contracting Parties in accordance with a complex formula for contributions set out in Article 12 of the Convention, to a limit of 600 million SDRs.

3. **1977 Sea Bed Mineral Resources (Convention on Civil Liability for Oil Pollution Damage Resulting from Exploration for and Exploitation of Sea Bed Mineral Resources (London)); adopted 1 May 1977, but not yet in force.**

The objective of this Convention is to ensure adequate compensation is available to victims of pollution damage from offshore activities by means of the adoption of uniform rules and procedures for determining questions of liability and for providing such compensation. The operator is liable for damage originating from the installation, and liability extends for 5 years after abandonment of the installation. The operator will be exonerated if he / she can prove that the damage resulted from a war, a natural disaster, an act or omission by the victim with the intent to cause damage, or the negligence of the victim. Liability is limited to 30 million SDR unless damage is caused by a deliberate act of the operator and insurance coverage is mandatory.

4. **1989 CRTD (UN/ECE Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (Geneva)); adopted 10 October 1989, but not yet in force.**

Created under the auspices of the United Nations Economic Commission of Europe (UN/ECE),¹⁹ the

objective of this Convention is to establish uniform rules that ensure adequate and prompt compensation for damage during the international and domestic carriage of dangerous goods. Damage, as defined in the Convention, includes the loss of life, loss or damage to property and loss or damage by contamination to the environment caused by dangerous goods. Environmental damage is limited to the costs of reasonable measures of reinstatement and the costs of preventive measures. The Convention does not cover nuclear damage, damage in places non-accessible to the public, or damage derived from dangerous goods carried by pipeline.

The carrier is defined as the person who controls the use of the vehicle where the dangerous goods are carried, and he/she is strictly liable for damage caused during the transport of goods, including loading and unloading, and is required to maintain insurance. It should be noted that the owner of the vehicle is presumed to control the use of the vehicle unless he/she proves otherwise. The carrier can be exonerated from liability if he/she proves that the damage was caused by an act of war, hostilities, civil war, insurrection, by a natural phenomenon of exceptional character, or by an act or omission with the intent to cause damage by a third party. Liability is channeled to the carrier and carriers may be jointly or severally liable.

Financial liability of the road and rail carrier is limited to 18 million SDR for loss of life or personal injury and 12 million SDR for any other claim. Similarly, the liability of the carrier of an inland navigation vessel is limited to 8 million SDR and 7 million SDR, respectively. However, the carrier is not allowed to limit his/her liability if the damage resulted from a personal act or omission committed with the intent to cause damage. Claims must be brought within 3 years from the date at which the person suffering damage knew or ought reasonably to have known of the damage and of the identity of the carrier, but this period may be extended if the parties so agreed after the incident. In no case, can an action be brought after 10 years from the date of the incident. Actions for compensation may be brought in the courts where the damage occurred, the incident occurred, the preventive measures were taken, or where the carrier has his/her habitual residence.

5. **1993 Lugano Convention (Convention on Civil Liability for Damage Resulting From Activities Dangerous to the Environment (Lugano)); adopted 21 June 1993, but not yet in force.**

¹⁹ See www.unece.org/

This Convention aims at ensuring adequate compensation for damage resulting from activities dangerous to the environment and also provides for means of prevention and reinstatement. It only applies to dangerous activities, defined as an open-ended category that includes but is not limited to: hazardous substances specified in Annex I, genetically modified organisms, micro-organisms and waste. It covers all types of damage including loss of life, personal injury, damage to property, loss or damage by impairment to the environment, and the costs of preventive measures (both traditional damage and environmental damage) when caused by a dangerous activity. The Convention applies whether the incident occurs inside or outside the territory of a party, but does not apply to damage arising from carriage, or to nuclear substances. The extension of the territorial application of the Convention is based on rules of reciprocity.

The operator is strictly liable for damage caused during the period when he/she exercises control over that activity, and is required to maintain insurance. The operator may be exonerated from liability for damage if he/she proves that the damage was caused by an act of war, a natural phenomenon of exceptional character, an act done with the intent to cause damage by a third party, or resulted from compliance with a specific order from a public authority. Contributory fault on the part of the victim may also reduce the amount received in compensation. Actions for compensation must be brought within 3 years from the date on which the claimant knew or ought reasonably to have known of the damage and of the identity of the operator. In no case shall actions be brought after 30 years from the date of the incident which caused the damage.

3.4 Identified National Regimes

At a national level, many countries, both developed and developing, have enacted legislation dealing with some form of liability and compensation for environmental damage or "natural resource damage." In this paper, representative regimes from every continent are discussed for illustrative and comparative purposes. It should also be noted, as a point of caution, that some of the national legislation might have been amended or repealed at the time this paper was compiled and finalized.

- (i) North America
 - a) The United States:

The U.S.A. has a comprehensive system for imposing civil liability for natural resource damages, which has become the template for similar efforts in the Americas, Europe, Africa and Asia. The American Superfund program was enacted in 1980 as *CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)*. This legislation provides the federal Environmental Protection Agency (EPA) with a varied and potent set of tools to effectuate hazardous waste cleanup.²⁰ However, when *the Oil Pollution Act of 1990 (OPA90)* came into effect, it superceded CERCLA for matters related to oil pollution. Since then, *CERCLA* mostly deals with hazardous substances other than oil, principally contaminated land, but also in rivers and lakes, whereas oil pollution and oil-related aspects of damage to the marine environment are governed by *OPA*.

Aside from these federal statutes, individual states are also free to set higher standards than these regimes, a right that many have taken advantage of in State laws are enforced through state-run environmental protection agencies. A review of the federal regimes *CERCLA* and *OPA* are included below.

1. *1980 CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act of 1980) 42 U.S.C. ss. 9601-9675.*

This Act imposes liability for natural resources damage caused by hazardous substances. It is important to note that claims based on *CERCLA* usually concern clean-up costs, lost public use and/or and natural resource damages. Recovery of property damage, personal injury and economic loss are not dealt with under *CERCLA*; such claims must be based in tort law.

The Act sets out four categories of "Potentially Responsible Parties" (PRPs) which include: (1) current owners and operators of a facility at the time of clean-up; (2) owners and operators of a facility at the time the hazardous substances were disposed of; (3) persons arranging for transport and disposal of hazardous substances (or generators of hazardous waste); and (4) transporters of hazardous substances. In all cases, liability is strict and parties can be jointly or severally liable. This allows the government to pursue any individual responsible party for the whole cost of site clean-up. . It also may be noted that the Act covers retroactive pollution, in the sense that historical pollution that continues to be a threat is accepted as admissible under *CERCLA*. Thus, past and present owners of a contaminated site may be liable for clean-up costs and natural resource damages.

²⁰ See Church, T.W. & R.T. Nakamura, "Beyond Superfund: Hazardous Waste Cleanup in Europe and the United States." 1994. *The Georgetown International Environmental Law Review* 7(1): 15-58.

The liability provisions of *CERCLA* require a proven injury to the resource, an injury being an observable adverse change in a natural resource that is directly or indirectly the result of the discharge. Defenses are under *CERCLA* are limited and have been applied very narrowly. They include an act of God, an act of war, and an act or omission of a third party. It is considered no defense that the party's actions may have been lawful (i.e. allowed by permit) at the time taken.

Public trustees are designated to act on behalf of the public interest to recover for natural resource damages. Under *CERCLA*, this trustee has broad discretion in assessing the value of natural resource damages. Because the right to make natural resource damage claims is limited to designated trustees, local governments, private parties are given clearly defined public participation opportunities.

The federal EPA is charged with the responsibility of overseeing environmental clean-up and remediation. Typically, there are four methods the EPA uses to force the polluter to pay for clean-up expenses.²¹ First, the EPA can do the work itself and then sue one or more PRPs in a subsequent cost-recovery action. Second, the EPA can sue targeted PRPs in advance of any cleanup work, obtain a judgment of liability, and then use that judgment either to make the PRPs do the work or to ensure that costs in a subsequent government-financed cleanup will be recovered. Third, the EPA can issue a unilateral administrative order to compel parties to undertake a clean-up action, and should parties not comply, the potential penalty is treble damages. Finally, the EPA can negotiate a voluntary clean-up agreement with the PRPs with the ability to use other coercive alternatives should negotiations prove unfruitful. This last option has been most prevalent in recent years. With any of these options, *CERCLA* requires the clean-up initiatives to achieve "background levels" of pollution or at least remove the threat of further human health and ecological concerns. In the case where permanent habitat loss cannot be avoided, mitigation ratios are used to determine off-setting restoration elsewhere.

Under the Act, liability is limited to US\$50 million for natural resource damages, but a \$1.6 billion trust fund (or "*Superfund*") was established to pay for removal and remediation when no responsible party

can be found. In 1986, extensive amendments to *CERCLA* were enacted, known as the *Superfund Amendments and Reauthorization Act (SARA)*,²² which increased the fund to \$9 billion.²³ However, the primary focus of *CERCLA* has remained on the parties connected with the contaminated site or the hazardous substances it contains to pay for the clean-up. An action against a PRP must be brought within 3 years from the date of discovery of the loss of natural resources to recover damages.

2. 1990 OPA (Oil Pollution Act of 1990) 33 U.S.C. ss. 2701 – 2761.

This Act imposes liability for damage caused by discharges of oil into navigable waters, adjoining shorelines or the EEZ of deep ocean waters. Strict liability is imposed on owners, operators or charters of transport vessels, onshore facilities or pipelines, and the lessees of offshore facilities or deep water ports. Defenses are identical to the ones listed in *CERCLA* and include an act of God, an act of war, and an act or omission of a third party. Public vessels and permitted discharges are excluded from liability.

As with *CERCLA*, a public trustee is designed to act on behalf of the public interest to recover for natural resource damages. However, *OPA* differs from *CERCLA* in that *OPA* expressly mandates the measure of damages as the cost of restoration or replacement, the diminution in value pending restoration and assessment costs rather than leaving costs to be determined by the discretion of the trustee.

Liability is also limited under *OPA*, with the amount dependent on the type of facility discharging oil. For example, tank vessels are liable for up to US\$10 million, offshore facilities up to US\$75 million, and onshore facilities and deepwater ports up to US\$350 million. The time period in which to bring forth an action is limited to 3 years.²⁴

b) Canada:

Environmental protection in Canada is shared between the federal and provincial governments. The Canadian federal government regulates specific environmental issues flowing from federal jurisdiction, such as the protection of fish and fish habitat, transboundary pollution, and transboundary movement of goods or waste. The provinces have broad powers over property and civil rights, and matters of local concern. Historically, provincial

²¹ See American Re. *Survey of International Environmental Remediation Regulations*. A. Soler (ed), 1997; see also Church & Nakamura, *supra* note 20.

²² 42 U.S.C. 9601 (1986).

²³ Jacoby, D. & A. Eremich, "Environmental Liability in the United States of America." In *Environmental Liability*. International Bar Association, IBA Section on Business Law, 1991. p. 63-94.

²⁴ For more information on the function and operation of the Oil Spill Liability Trust Fund see: www.wscg.mil/hq/npfc/npfc.htm

jurisdiction has been interpreted broadly and has resisted any expansion of federal government jurisdiction, including environmental protection.²⁵ This has resulted in a fragmented and often contradictory scheme of federal and provincial environmental regulation. What follows is a summary of the major federal and provincial statutes which impose environmental liability.

Federal Legislation

1. 1985 Fisheries Act R.S.C. 1985 c. F-14, ss. 34-42.

This Act prohibits persons from carrying on or undertaking any work that results in (1) the harmful alteration, disruption or destruction of fish habitat, or (2) the deposit of any type of deleterious substance in water frequented by fish. It expressly preserves all civil remedies available at common law, and in addition, provides a statutory right to damages for the government and commercial fisherman in cases where there has been a loss due to a deposit of a deleterious substance in water frequented by fish.

Those who may incur liability include persons who owned or had control of the deleterious substance, as well as those who caused or contributed to the deposit of a deleterious substance in water frequented by fish. Liability includes all costs and expenses incurred by the Crown in taking measures to mitigate or remedy the adverse effects of such deposit. However, the language of the Act appears to limit damage claims to those which in some way relate to loss of fish or fish habitat. In this respect, it is doubtful whether the Act would permit a damage claim by a waterfront property owner who had to obtain a new source of drinking water because of water pollution.²⁶

2. 1985 Canada Shipping Act R.S.C. 1985 c. S-9, ss. 673-727.

Part XVI of the Act addresses liability for damages caused by oil discharged from ships, including the costs and expenses incurred by a public authority for measures taken to prevent or remedy the oil pollution damage. The Act is complicated and governed in part by international conventions. Specifically, the upper limits on liability are governed by the 1969 *International Convention on Civil Liability for Oil Pollution Damage (1969 CLC)* as amended by the 1992 *Protocol*.

Under the Act, the basic principle is that the owner of the ship which causes the oil discharge will be liable. The Act does provide for specific defenses, such as when discharges result from an act of war, a natural phenomenon of exceptional character, or when a discharge is *wholly* caused by a third party with the intention to cause damage or by a negligent or wrongful act of any government or other authority responsible for the maintenance of lights or other navigational aids. The use of the word *wholly* would appear to exclude these defenses from cases where there have been contributory causes. A claim may also be defended on the basis that the oil discharge occurred fully or partially from a claimant's act or omission which was negligent, or done with an intention to cause damage.

In addition, the Act permits a direct action against the insurer (defined as the "guarantor") of the ship. Ships covered by the 1969 *CLC* are sea going ships which carry oil in bulk, which carry more than 2,040 tons of oil must generally be insured before entering Canadian waters. The insurer may rely on the same defenses as the owner and may also defend on the basis that the discharge resulted from the owner's willful misconduct. Persons who claim to have been damaged and who are not public authorities may claim against oil pollution funds established under the Act and under the 1971 *FUND Convention (as amended by the 1992 Protocol)*.

3. 1999 CEPA (The Canadian Environmental Protection Act) S.C. 1999 c. 33, ss. 39-103.

The newly revised *CEPA*, *inter alia*, deals with the regulation of toxic substances and provides for interim orders to be made on an emergency basis to protect the environment. The Act also deals with such matters as spill reporting, the export and import of toxic substances and waste materials, international pollution and ocean dumping. Offenses are created for violations of the Act.

The preamble of the Act includes a commitment to both pollution prevention and the precautionary principles, which are also often referred to throughout the Act. Specifically, sections 39 and 40 permit a civil cause of action for damages or an injunction as a result of conduct in contravention of *CEPA*. As of yet, the constitutionality of this section has not been tested and it may arguably be *ultra vires* of the federal government on the basis that the power to legislate private remedies for damages is within the exclusive jurisdiction of the provinces.

²⁵ See American Re, *supra* note 21; see also Jeffery, M.I. "Environmental Strategies for the 1990s: A Canadian Perspective." In *Environmental Liability*. International Bar Association, IBA Section on Business Law, 1991. p. 95-112.

²⁶ Dolden, E. "Environmental Law in British Columbia: A Primer for U.S. Insurers." 1997. *Insurance Report* at www.dwf-inslaw.com/publications/

Part 5 of the Act deals with the release and clean-up of toxic substance specified on the list of Toxic Substances in Schedule 1 of *CEPA*. The Crown can recover the costs and expenses associated with taking emergency measures from any person who owns or has charge of the hazardous substance immediately before its initial release. However, these costs are only recoverable to the extent they have been "reasonably incurred in the circumstances," which means that the onus is on the Crown to establish that the costs were reasonable. In any case, a claim by the Crown for costs against a person does not limit any right of recourse or indemnity that a private individual may have against the alleged perpetrator.

Provincial Legislation:

1. *British Columbia: 1996 Waste Management Act R.S.B.C. 1996 c. 482, ss. 26-28.*

This Act is the central environmental protection statute in the province of British Columbia. Pursuant to it, liability may be imposed for pollution clean-up costs upon an order being issued by government officials.

Specifically, section 26.5 of the Act empowers an official, the Regional Waste Manager, to order remedial work against: (1) the person who had possession or control of the substance at the time it escaped or was introduced into the environment; (2) any other person who caused or authorized the pollution; or (3) the person who owns or occupies the land on which the substance is located or on which the substance was located immediately before it was introduced into the environment. Since liability for clean-up can be based on a party's relationship to land, persons as landlords or mortgagees in possession may find themselves having to clean up contamination caused by a lessee or mortgagor.²⁷

Under section 27, a person who is held to be a responsible person is "absolutely, retroactively and severally liable to any person or government body for reasonably incurred costs of remediation of the contaminated site." A person, including directors and

officers of a corporation, therefore could be liable for conduct undertaken prior to the implementation of the legislation. This same principle has also been incorporated in the comparable Alberta, Manitoba and Ontario legislation. A particular section of the legislation deals with minor contributors, and allows for the Ministry to exempt a person from joint and several liability, leaving them liable only for their minor contribution of the contamination.

In addition to this Act, there are also a number of other provincial statutes which regulate the use of the environment.²⁸ However, presently in British Columbia, the only statutes which purport to impose direct civil liability in the province are federal statutes; there are no existing provincial statutes which attempt to create civil liability towards third parties who suffer environmental damage. It is expected that such legislation will be in force in the near future. In the meantime, the most immediate environmental liability faced by persons doing business in British Columbia is that of government ordered clean up costs.

2. *Ontario: 1990 Environmental Protection Act R.S.O. 1990 E.19, ss.17-18, 40-45, 92-97.*²⁹

This Act empowers authorities to order current and previous owners and occupiers of real estate to clean-up property contamination and/or hazardous waste spills. The Ministry of Environment and Energy has the authority to issue cleanup orders and regulate remediation activities. In fact, the government may order an offender to do everything practical to prevent, eliminate or reduce the adverse effects of the pollution on water or land, and to restore the environment to its natural condition, if possible. Generally, land must be restored to background levels of contamination, however, the Ministry has the power to authorize site-specific cleanup criteria based on the location of contaminated land and anticipated future use. If an offending party fails to take remedial action, the government may perform clean-up activities and sue for reimbursement. Additionally, the Act allows owners who have paid for remediation to bring subsequent civil actions for contribution against former owners or polluters.

²⁷ Dolden, E. & R. Kischer, "CERCLA-like Legislation: Effective in British Columbia on April 1, 1997." 1997. *Insurance Report* at www.dwf-inlaw.com/newsletters

²⁸ They include the Water Act, R.S.B.C. 1996. c. 483; the Forest Act, R.S.B.C. 1996. c. 157; the Environment Management Act, R.S.B.C. 1996. c. 118; the Transportation of Dangerous Goods Act, R.S.B.C. 1996. c. 458; the Land Act, R.S.B.C. 1996. c. 245; and the Health Act R.S.B.C. 1996. c. 179; for example the Health Act provides for the recovery of "all reasonable costs and expenses incurred in terminating a health hazard or unsanitary condition...[from any]...person whose act, default or sufferance, the condition or health hazard was caused, or who was responsible for the health hazard or condition..."; the Environment Management Act permits recovery of costs associated with the cleanup of an environmental emergency "from the person whose act or neglect caused or who authorized the events that caused the environmental emergency in proportions the Court determines."

²⁹ Subsequent to its enactment, this Act has since been amended by the Waste Management Act and by Bill 62/94.

The Act contains a very broad definition of what constitutes "adverse effects" in relation to discharges, including impairment of environmental quality, adverse effects on health or safety, and property damage. Extensive penalties, including monetary fines, may be assessed against a polluter, and individuals may be subject to prison terms for certain offenses. Corporate directors also have personal duty to exercise reasonable care to prevent corporations from causing or permitting environmental damage and can, in certain circumstances, be held criminally liable for wrongful conduct.

(ii) Europe

a) Germany:-

Germany is known to have one of the more stringent and developed systems of environmental regulation governing hazardous waste disposal and remediation in the European Community.³⁰ Although the *German Environmental Liability Act* does not as such include the concept of "natural resource damages" as in the U.S.A.'s CERCLA, it does recognize the possibility of a claim for restoration costs as compensation for damage to the environment as a corollary to property damage.

*German Environmental Liability Act
Umwelthaftungsgesetz of 10 December 1990*

Although this Act is limited to personal injury and property damage, it does implicitly deal with damage to the environment insofar as it is included in the concept of "expenses incurred for restoration measures" as a corollary of physical property damage. If damage to property also impairs nature or scenery, then the mere fact that restoration costs may exceed the value of the property forms no bar to the claim. In this way, the Act links the traditional private interest of protection of property to the general interest of environmental protection.³¹

Furthermore, the Act also provides for strict liability for any property damage or bodily injury caused by the pollution of the air, soil or water, and for a private right of action for injury or death caused by exposure to contamination. Liability for property damage and bodily injury is capped at 160 million DM per party, or a total of 320 DM, provided that the damages have

been caused by a single event. If no responsible party can be found with sufficient funds to undertake the cleanup, public funds are used for remediation.³²

b) Italy:

Italy is unique in that it is the only European country that currently recognizes the concept of "natural resource damage" in the same way as the U.S.A.'s CERCLA and the 1993 *Lugano Convention* do, as a separate head of damage.³³

*Italian Law 349/1986 Gassetta Officiale No. 162,
15 July 1986, Suppl. Ord. No. 59*

This law allows the State to pursue damages against any person who has damaged, altered or impaired the environment through willful or negligent behavior in breach of environmental regulations. It also allows the State to force the polluter to clean-up surface waters, soil and groundwater. Although this law recognizes the concept of pure economic loss, the right of action is limited in that only the State and local authorities have standing to sue for natural resources damages on a fault liability basis. As the State has hardly used the provision, it seems that this environmental liability Act has remained law in the books rather than in action.³⁴

c) Denmark:-

Denmark has passed legislation that recognizes strict liability for environmental damage on companies in certain identified industries.

*1994 Compensation for Environmental Damage
Act 225/94*

The Act covers industries engaged in steel, wood and plastic manufacturing or processing, chemical and glue manufacturing, printing operations, and the generation of power and heat, among others. Entities engaged in these activities that cause damage to the environment may be held strictly liable by private individuals who have suffered damage or by governmental authorities. However, the liable party only has to pay compensation if the damage is over a certain tolerable limit, and what constitutes a "tolerable limit" is most often clarified in guidelines issues by the environmental authorities. Thus, if

³⁰ See European Environmental Bureau, *supra* note 5; see also American Re, *supra* note 21.

³¹ See UNEP *Compilation of Documents*, *supra* note 8.

³² See American Re, *supra* note 21.

³³ American Re, *supra* note 21.

³⁴ UNEP *Compilation of Documents*, *supra* note 8.

³⁵ Truelsen, P.A. "Environmental Liability as an Instrument in Danish Environmental Law?" 1998. At www.akf.dk/som/pdf/som32/8truelsen.pdf

environmental damage stays within the limits prescribed by environmental permits or guidelines, there is no basis for claiming compensation under the Act. Furthermore, the rules of strict liability only apply to activities which are enumerated in the Act and which take place as a commercial or public activity. These listed activities are few, and so far no decisions in the superior courts have imposed liability on a company or public authority pursuant to the Act.³⁵

d) Czech Republic:³⁶

The Civil Code deals with civil liability for environmental damage. Section 415 lays down a general obligation saying that “every person is obliged to act in such a way that no damage occurs to health, property, nature and environment”.

Under section 420

- 1) Everybody is liable for damage caused by neglecting his/her legal duties.
- 2) The damage is considered to be caused by a legal or physical persons if caused during their activity by those who were employed to carry out the activity. The latter persons are not considered liable for the damage incurred according to this Code; their liability based on labour legislation is not affected.
- 3) Those who can demonstrate that they did not cause the damage incurred are exempted from the liability.

Pursuant to Section 420a,

- 1) Everybody is liable for a damage caused by his/her operational activity.
- 2) The damage is considered to be caused by the operational activity if it is caused by:
 - (a) activity of an operational nature or by a thing used during this activity;
 - (b) physical, chemical or biological impact of the operation on the environment;
 - (c) the lawful carrying out or ensuring of the work that leads to a damage to another person’s real estate or that makes using of the real estate substantially difficult or impossible.
- 3) A person who caused the damage is exempted from the liability only if he/she demonstrates

that the damage was caused by an unavoidable event that did not originate in the operation or by an activity by the injured person.

If the damage was caused by several persons they are liable for the damage jointly and severally.³⁷ In certain reasoned cases the court may decide that those who caused the damage are liable according to their participation in causing it. Ecological harm is defined in the Act on Environment (No. 17/1992 S.B.) as the loss or impairment of the natural functions of ecosystems caused by the damaging their elements or by breaking their internal relations and processes as a result of human activity.³⁸ Any person damaging the environment or by any other illegal activity caused the ecological harm shall restore natural functions of the damaged ecosystem or of its part. If it is not possible or purposeful because of serious reasons he/she shall compensate the ecological harm in another way (compensatory performance); if this is not possible he/she shall compensate the harm financially. Juncture of these compensations is not excluded.³⁹

The main difference between environmental damage and the ecological harm is that, unlike environmental damage, in the case of ecological harm the only body entitled to claim the harm is the State – through state administration authorities. Ecological harm does not have an economic nature; it is a loss of ecological functions of the environment, significant, irreversible harm that destroys the nature’s self-regeneration capacity.

The liability for ecological harm is not a civil liability. It belongs to the public law area. However, general provisions concerning liability for damage and on compensation for damage are to be used to deal with this harm. The ecological harm has been used very rarely in the Czech Republic although it has been an attempt to cover legally not only economic dimension of a damage to the environment. The crucial problem is to express the harm in a quantified way. It is difficult to calculate the losses or weakening of ecological functions of ecosystem. Therefore also another section of the Act on Environment (section 28) concerning fine that is to be imposed on a legal person who by a breach of the environmental legislation caused the ecological harm has not been used. State administration authorities are charged with a responsibility to impose this fine.

There are three categories of liability concerning environment in the Czech legal system:

³⁶ Information provided by Dr. Eva Kruzikova, Preslickova 5, 10600, Prague 10, Czech Republic; Email: eva.kruzikova@ecn.cz

³⁷ Section 438

³⁸ Section 10

³⁹ Section 27.

- administrative liability
- civil liability
- criminal liability

Administrative liability is a liability for illegal act. It concerns a breach of law – of a duty imposed upon a person by the environmental acts. The liability applies for both legal and physical persons. In the Czech legal system the administrative liability of legal persons is a strict absolute liability (no specified exemptions from liability), that of physical persons is a fault one. The administrative liability plays a crucial role within the liability regimes in the field of the environmental protection. Administrative offences of physical persons are specified in:

- the act No. 200/1990 S.B., on administrative delicts (in the field of public health, water management, agriculture, hunting and fishing),
- sectoral environmental legislation (Clean Air Act, Water Act, Waste Act, Nature and Landscape Protection Act, Act on Chemicals, etc.).

Administrative offences of legal persons are specified in sectoral environmental legislation (Clean Air Act, Water Act, Waste Act, Nature and Landscape Protection Act, Act on Chemicals, etc.). The environmental law uses exclusively fines as sanctions. Their rates differ based on the importance of a breach of law. They are specified by sectoral legislation. Liability procedures and imposing fines are in hands of the competent authorities, particularly Czech Environmental Inspectorate, regional, district and municipal offices and Administrations of national parks and landscape protected areas. The limits for imposing fine have been specified as 3 years from the day when the offence was committed, and 1 year from the day

when the competent state authority got an information about the offence.

Criminal liability is based only on Criminal Code. It is the fault liability and it concerns only physical not legal persons. The fault has two forms: (a) intention, (b) negligence. The latest amendment of the Czech Criminal Code came into effect on 1 July 2002. Several environmental crimes are dealt with under the amendment. They are: Threatening and damaging the environment consist in intentional polluting or other damaging soil, water, air, forest or any other environmental element by breaching legislation on environmental protection or on the use of natural resources, and in threatening habitats of populations of wild fauna or flora on a larger area, on especially protected territory or in water source protected by a buffer zone or in intentional increasing or impending a diversion or mitigation of environmental damage.⁴⁰ Negligent threatening and damaging of environment consists in causing or increasing environmental damage or in impeding of its diversion or mitigation.⁴¹

Apart from these general bodies of crime, the Criminal Code distinguishes several specific crimes according to particular part of environmental legislation stipulating special duties: For example damage to forest caused by illegal logging⁴², dangerous waste disposal⁴³ and illegal handling of protected and wild fauna and flora.⁴⁴ The Criminal Code defines also other bodies of crime that also concern the environment. For instance, poaching⁴⁵, illegal production or detention of radioactive material and highly dangerous substance⁴⁶, illegal production or detention of narcotic and psychotropic substances or poisons⁴⁷, and cruelty to animals.⁴⁸

Apart from all the above listed bodies of crimes, there are others in the Criminal Code which may, under certain circumstances, concern the environment. These include, trespassing of jurisdiction of public authority⁴⁹, endangering the safety of the public⁵⁰ (intentional) and (negligent)⁵¹, injury to the property

⁴⁰ Section 181c.

⁴¹ Section 181c

⁴² Section 181c

⁴³ Section 181e

⁴⁴ Section 181f

⁴⁵ Section 178a

⁴⁶ Section 186

⁴⁷ Section 187 and 188

⁴⁸ Section 203

⁴⁹ Section 158

⁵⁰ Section 179

⁵¹ Section 180

of others⁵², and misusing of ownership.⁵³ Sanctions for environmental crimes include imprisonment, pecuniary penalty (fine), and prohibition of certain determined activities.

(iii) The Middle East⁵⁴

a) Oman:

Oman is well regarded as a country with defined environmental policies. In fact, the achievements of the Sultanate in environmental sanitation and conservation have placed it among the top 10 in the UNEP's list of most environment friendly nations all over the world.⁵⁵ The primary Omani legislation concerned with the environment is *Royal Decree 10/82*, which provides a framework for all other laws and regulations concerning environmental protection. However, civil liability is also evidenced in older legislation, such as *the 1974 Marine Pollution Control Law*.

1. 1974 Marine Pollution Control Law Royal Decree No. 34/74.

This law prohibits any person from discharging a pollutant into the pollution free zone, which extends 50 miles off the Oman coast, from a vessel, a land based source, or an oil transmission apparatus. In particular, article 6 expressly addresses civil liability for costs and damages. Under this article, the owner of the vessel or occupier of the land or transmission apparatus is strictly liable for the costs incurred by the government for prevention and restoration costs, and for damages suffered by any person as a result of the discharge. Liability is limited and the amount is based on the vessel's tonnage.

2. 1982 Law on the Protection of the Environment and Prevention of Pollution Royal Decree No. 10/82.

The progressive nature of this law in environmental protection is revealed in its inclusion of environmental damage and environmental pollution in the definition section of the Act. Article 6 includes an obligation of any owner (which is defined as any person, government body, or private, national or foreign body owning, leasing or responsible for the operation of a site) to take necessary steps to prevent environmental pollution and to guard its natural

resources. Anyone causing damage to the environment is bound to repair the damage and bears all expenses plus the payment of compensation, which is fixed by the Ministry under article 17. Furthermore, the law creates a number of criminal penalties, such as fines and imprisonment, for various environmental offences.

b) Kuwait:

For many years, the Kuwaiti government has supported environmental protection measures, and the damage caused by Iraq's invasion has only strengthened this resolve. In fact, Kuwait was the first country in the Arabian Gulf to issue national legislation addressing oil pollution in the Gulf, and this law is described below.⁵⁶ In general, other Middle Eastern countries have followed suit with Kuwait in signing regional agreements and enacting national laws focused mainly on the marine environment and oil pollution.

Law No. 12 of 1964 12/64

The purpose of this law is to prohibit the discharge of oil in the internal waters and the territorial sea adjacent to Kuwait, and it implements *the International Convention for the Prevention of Pollution of the Sea by Oil, 1954*, to which Kuwait is a party. It applies to Kuwait and non-Kuwait ships which cause pollution, while they are in the internal and territorial sea of Kuwait. However, the law does not provide for a civil cause of action for damage caused by oil pollution, it only creates offences under the Act.

(iv) Africa

a) Kenya:

Kenya's framework environmental law entitled *the Environmental Management and Coordination Act* came into force January 2000.⁵⁷ This was the culmination of a long and active process which was initiated by UNEP at the request of the Kenya Government in 1993. In 1993, Kenya launched the National Environmental Action Plan (NEAP), which called for a government sessional paper on sustainable development in order to set comprehensive guidelines and strategies for government action, building on the NEAP process. The end-product of this process was the 1999 Act described below.

⁵² Section 257

⁵³ Section 258

⁵⁴ A proper survey of national laws addressing issues of liability and compensation from the Middle East was not completed due to the fact that many of the laws were recorded in Arabic. Thus, the regimes illustrated in this section are not meant to be exhaustive.

⁵⁵ "Declaration of Environment Year caps a success story in nature conservation," *Oman Observer*, December 14, 2000.

⁵⁶ UNEP *Compilation of Documents*, *supra* note 8.

⁵⁷ *Making the Framework: Environmental Law in Kenya*, United Nations Environment Programme, Nairobi, 2001.

Environmental Management and Coordination Act No. 8 of 1999.

Kenya's new environmental protection Act provides for a legal regime to regulate, manage, protect and conserve biological diversity resources and access to genetic resources, wetlands, forests, marine and freshwater resources and the ozone layer. Although the Act does not include a definition for "environmental damage" or "natural resource damages" it does define "pollution," and it also includes thorough definitions of the polluter-pays principle and the precautionary principle.

Under the general principles of the entitlement to a clean and healthy environment, the Act states that any person may apply to the High Court to compel persons responsible for environmental degradation to restore the environment as far as practicable to its immediate condition prior to the damage. This section also provides compensation for any victim of pollution and the cost of beneficial uses lost as a result of an act of pollution and other losses that are connected with or incidental to pollution. The Act establishes a National Environment Restoration Fund, to function as a supplementary fund for the mitigation of environmental degradation where the perpetrator is not identifiable or where exceptional circumstances require intervention. It also creates a number of offences with penalties such as imprisonment and fines, but does not go as far as to create a civil cause of action for damages. However, under offences relating to pollution, the court may direct the polluter to meet the cost of the pollution to any third party through adequate compensation, restoration or restitution.

The Act establishes two administrative bodies to manage the environment. The National Environment Council, which formulates policies, sets national goals and promotes cooperation among stakeholders, and the National Environment Management Authority, which is the principal instrument for implementing of all policies relating to the environment. As part of its responsibilities, the Authority may issue and serve any person in respect of any matter relating to the management of the environment a restoration order to require the person to restore the environment as near as possible to its original state. It may also award compensation to be paid by the person on who the order is served to other persons whose environment or livelihood has been harmed.

b) Nigeria:

Nigeria is currently the largest producer of crude petroleum in Africa and the sixth largest in the world.⁵⁸ This makes it highly susceptible to marine pollution and blowouts especially in the exploration and production stages, as well as air pollution and greenhouse emissions associated with the continuous flaring of gas. At the present time, most of the laws are old and do not fully address many current and emergent issues related to liability and compensation especially those related to oil and gas operations. There is however, a draft bill which directly addresses liability and compensation for environmental damage that is modeled after the U.S.A's CERCLA which environmental groups are proposing to send to the legislature soon.

1999 Draft Bill: RECLEL (Response, Compensation and Liability for Environmental Damage Act)

The Federal Environmental Protection Agency (FEPA) is in the process of developing a law on response, compensation and liability for environmental damage in Nigeria. The overall objective of the proposed law is to put in place a legal framework capable of delivering acceptable compensation and provide for response and remediation regimes to cater to the interest of the environment. The law is expected to set up a fund pool, akin to the *Superfund* in the United States, which would be used to remedy and respond to environmental damages and disasters, especially in the oil industry. It will also be utilized for the purpose of rehabilitating areas where operations have ceased, pursuing conservation programs and carrying out continuous data collection and studies.⁵⁹ The draft bill closely resembles the U.S.A.'s CERCLA in many respects and even adopts the term "potentially responsible parties" (PRPs) to denote who is liable under the Act. Like its American counterpart, PRPs include past and current owners, operators, generators and transporters who are held responsible for all costs of removal or remedial action, damage to natural resources, and the costs of any injury to health. Likewise, corporations would also be liable for negligent acts committed in the past with present adverse effects. Liability is strict and only subject to limited defenses, namely, an act of God, war, or third party interference (which are the same defenses allowed under CERCLA and OPA). Liability is

⁵⁸ Nnadozie, K. "Environmental Regulation of the Oil and Gas Industry in Nigeria." Unpublished.

⁵⁹ *Ibid.*

limited, however, the perpetrator will have to pay full costs and damages if the damage was the result of willful misconduct, negligence or due to a violation of environmental safety regulations. There is also a time limitation imposed under the Act, in that actions for natural resource damages must be commenced within 3 years after the date of discovery of the loss.

The law will also require that certain categories of companies listed in it shall take out a specified minimum environmental risk insurance coverage in addition to a comprehensive general liability insurance. Aside from mandating the use of insurance, the Act also establishes an environmental insurance scheme to indemnify the environment and citizens from the loss arising from environmental pollution. It establishes the Environmental Trust Fund (the Envirofund) to settle expenses incurred in response and remedial actions. Contributions to the Envirofund will stem from a variety of sources including, *inter alia*, chemical and petroleum levies, a general corporate environmental levy and fines. Furthermore, the proposed law will greatly expand the role of the Federal Government through FEPA in steering the management of pollution arising from improper waste disposal activities, hazardous substance emissions, and oil spills.

(v) **Asia**

a) **China:**

Environmental Protection Law of Peoples Republic of China, 1989

In 1989 The People's Republic of China promulgated the Environmental Protection Law. Chapter V of the Law focussed on Legal Liability. Under Section 28 of the Act Enterprises and institutions discharging pollutants in excess of the prescribed national or local discharge standards are liable to pay a fee for excessive discharge according to state provisions and are required to assume responsibility for eliminating and controlling the pollution. Also in the event of a severe environmental pollution the responsible enterprise or institution is required to eliminate and control the pollution within a certain period of time.

The Law recognize categories of damages to include damages to public property, private property, damage to human person leading to injuries or death and damage to natural resources like land, forests, grasslands, water, minerals, fish, wild animals and wild plants.

The liabilities for environmental pollution under the Law include mere warnings, fines, the closure or suspension of the offending facility, and compensation to the unit or individual that suffered direct losses where the environmental pollution did not result solely from 'irresistible natural disaster'.

In addition to the above, a polluter whose activity has lead to a serious environmental pollution accident, leading to the grave consequences of heavy losses of public or private property or human injuries or deaths of persons shall be investigated for criminal responsibility according to law.

b) **Korea:**

1. *The Basic Environmental Policy Act, 1990, Law No. 4527*

The Korean government has over 15 environmental related laws. The most relevant for the purpose of this paper is *the Basic Environmental Policy Act*. Article 7 of the Basic Environmental Policy Act makes any person who causes environmental pollution due to his act or business activities, liable to bear the expenses for the prevention of such pollution, recovery of the contaminated environment and relief of damages.

2. *Liability for Environment Improvement Expenses Act, 1995. Law No. 4493, 4714*

Article 9 of the *Liability for Environment Improvement Expenses Act* further imposed environmental improvement charges called "improvement charges" on facilities, which are the direct cause of any environmental pollution due to discharge of lots of environmental pollutants in the course of circulation and consumption.

3. *The Environmental Pollution Damage Dispute Adjustment Act 1990, Law No. 4258. (Amended by Law No. 5079, Dec. 29, 1995)*

In 1990 the Government adopted *the Environmental Pollution Damage Dispute Adjustment Act* to relieve any damage to the health and property of citizens by providing procedures etc., of a mediation, conciliation and ruling for settling rapidly and fairly any dispute caused by any environmental pollution.

c) **Taiwan:**

Taiwan just recently passed *the Soil and Groundwater Pollution Remediation Act, 2000*, which is also based on the U.S. Superfund model. Active enforcement of this law is carried out by a government body referred to as the Environmental Protection Administration (EPA).

Soil and Groundwater Pollution Remediation Act, promulgated 2 February 2000

The Act imposes liability on "polluters" which are defined as any person who engages in the illegal discharge or disposal of pollutants, serves as an intermediary for the discharge of pollutants or fails

to dispose of pollutants pursuant to applicable laws or regulations. The "interested person" is a user, administrator, or owner of land at the time when the land is declared a pollution remediation site. The interested person of the polluted land has a right of recourse against the polluter for the damages, however, if the land is polluted due to their gross negligence then they too will be jointly and severally liable with the polluter for the costs incurred for remediation. Offenders under the Act may also be liable for government response costs and third-party damages. Government response costs include expenses associated with the development, assessment and implementation of a remediation plan for the contaminated site. Failure to pay these costs may result in a court order that doubles the sum. Aside from civil penalties, the law also contains administrative and criminal penalties that include the possibility of fines, and the temporary or permanent suspension of business.

The Act also prescribes the creation of a fund to defray the costs spent by the EPA in preparing remediation plans, and to cover necessary legal costs and administrative costs associated with remediation. Remediation charges, penalties, fines and a portion of the government budget all contribute to the fund. Furthermore, in order to remediate soil and groundwater pollution the government may also levy the manufacturer and importer of chemicals that are found to cause pollution damage.

d) Japan:

Japan used to be known as one of the most polluted countries in the world but has achieved remarkable progress in environmental pollution control over the last 30 years following the adoption of over 29 environmental related laws. In 1967, in response to environmental concerns, Japan implemented the *Basic Law for Environmental Pollution Control* ("Basic Law"), which has acted as the foundation for Japanese environmental regulatory guidelines and principles.⁶⁰ However, most environmental statutes, such as the *1973 Health Damages Compensation Law*, still focus on public health standards and on imposing liability and compensation for personal injury, specifically impairments to health. As such, there is currently no basis for holding private parties liable for the cost of pure environmental damage although some of the principles and procedures articulated in these laws would be applicable to liability and compensation regimes specifically relating to environmental damage.

The Basic Environmental Law, 1993. Law No.91

Under Article 37 of the Basic Environmental Law, a polluter is liable to bear appropriate and equitable share of the entire or a part of the expenses incurred by the State and local governments in any necessary measures undertaken to prevent environmental pollution or interference with conservation of the natural environment

Air Pollution Control, 1968. Law No. 97

Article 25 of the *Air Pollution Control Law, 1968* goes further to make a polluter liable to pay compensation in the case of air pollution resulting in harm to human life or health. The Article describes a polluter's liability as 'absolute liability'. Consequently even in the event of the pollution being caused by natural disaster or any other irresistible force the polluter is still liable for compensation. The court is only required to take the circumstance into account in deciding the extent of the polluter's liability and the sum of harms.

Note that the Law allows individuals to proceed for compensation independently within a specified time against a polluter. Article 33 – 37 of the Act further makes a polluter liable to imprisonment and / or fine.

1973 Compensation for Health Damages caused by Environmental Pollution

This is one of the most unique features of Japanese environmental legislation. Although this law does not deal with pure environmental damage *per se*, it does stipulate that certain injuries to health are to be compensated on a graduated scale reflecting the severity of the injury. The system is designed to facilitate settlement of damage compensation between the polluter and the victims on the basis of civil liability, and cost apportionment is at least partially based on the "polluter-pays" principle.⁶¹ Since it is almost impossible to determine who is responsible for how much of the pollution, for how much of the ailment, and to what degree liable for compensating the individual patients, all sources of soot and smoke throughout the country are considered responsible, and all companies are asked to share the costs of sulphur dioxides emitted. Costs are covered through a compensation fund financed from levies charged to firms exceeding a specified size if they emit sulphur dioxide. In this sense, this method could likewise be utilized to fund the restoration of environmental damage when the exact source and the quantum of pollution damage are diffuse and difficult to identify.

⁶⁰ See American Re, *supra* note 21.

⁶¹ Kato, K. "The New Frontiers of Environmental Policy in Japan." In *Environmental Liability*. International Bar Association, IBA Section on Business Law, 1991. p. 47-62.

e) **India:**

India has approximately 41 environmental related laws bordering on issues such as water quality and pollution, air quality and pollution, forest conservation, hazardous substance management, noise pollution, ozone layer depletion and biodiversity, as well as litigation.

Environmental (Protection) Act of 1986

In 1986 the Indian government enacted *the Environmental (Protection) Act of 1986 for the protection and improvement of its environment*. Under Section 9 of the Act a polluter is liable for the actual and apprehended occurrence any discharge in excess of the prescribed standard, and is consequently bound to prevent or mitigate the environmental pollution.

The polluter under the Act is also liable for the expenses, if any, incurred by any authority or agency with respect to any remedial measures they have taken in solving the problem. The expenses also includes interests (at such reasonable rate as the Government may, by order, fix) from the date when a demand for the expenses is made until it is paid.

The Act did not use the word 'damage' rather it used the expression 'Environmental pollution' which it defined as 'the presence in the environment of any environmental pollutant'. The Act also did not make provision for compensation for personal injury that may result as a result of any pollution.

Public Liability Insurance Act, 1991

The government in 1991 further enacted *the Public Liability Insurance Act*. The Act is limited to providing relief for persons affected by accident occurring while handling hazardous substances. The Act defined 'handling' as 'the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance'

Under Section 4 of the Act any person intending to handle hazardous substances as defined above is required to take out one or more insurance policies providing for contracts of insurance whereby he is insured against liability to give relief. Interestingly liability under the Act in the event of death or injury to any person (other than a workman) or damage to any property is strict.

f) **Maldives:**

Environmental Protection and Preservation Act, 1993

In 1993, Maldives enacted *the Environmental Protection and Preservation Act*. The Act like the India Environmental Act based its liability element on the Polluter Pays Principle. The Act view any act which undermines any of its provisions or damage the environment as criminal and thereby subject to penal measures which in this case is limited to fines ranging between Rf5.00 (five Rufiyaa) and Rf500.00 (five hundred Rufiyaa) for minor offences and a fine of not more than Rf100,000,000.00 (one hundred million Rufiyaa) for major offences.

The fines shall be levied, depending on the actual gravity of the offence, by the Ministry of Planning and Environment or by any other government authority designated by that Ministry. Beyond the penal fine to be imposed on an offender under the Act, Section 10 further vests on the government the right to claim compensation for all damages that are caused by activities that are detrimental to the environment. A polluter is also liable for the restoration of the environment as a result of any damage caused by his activity.

g) **Nepal:**

Environmental Protection Act, 2053 (1997)

In 1997 the government of Nepal enacted the above environmental legislation to provide for a clean and healthy environment and as far as possible minimise adverse impacts likely to be caused from environmental degradation on human beings, wildlife, plants, nature and physical object. The Act provided for the establishment of an Environment Protection Fund for the prevention and control of pollution.

On the issue of liability and compensation the Act went further than the other Acts already considered in the following areas;

1. The Act encourages individuals and institutions to seek compensation where they have suffered any form of damage;
2. The Act made reference to the adequacy of such compensation by the use of the phrase 'reasonable'
3. The Act allows the relevant Authority to help in compensation recovery. This is relevant in situations where the individual for any reason is not able to proceed for compensation (See Section 17 of the Act).

a) **Sri Lanka:**

National Environmental Act 1980

The Sri Lankan government in 1980 enacted the *National Environmental Act*. The Act was amended in 1988. Anyone who contravenes or fails to comply with the provision of the Act or regulation and/or directives made thereunder is liable to a number of penal measures, which include the following;

1. Imprisonment;
2. Fine;
3. Both imprisonment and fine;
4. Expenses incurred by the authority in the correction of damages; and
5. Closure of the factory in case of facilities

b) Cambodia:

Environmental Protection and Natural Resources Management of 1996

Chapter IX of the *Cambodian Law on Environmental Protection and Natural Resources Management of 1996* provides for the liability of a polluter. Liabilities under the Act like most of the preceding laws are in the form of fines, remuneration and compensation. Like most of the Act already considered the Cambodian Law also proffered imprisonment as a liability option. Article 22 of the law covers offences which commission causes harm to physical body or human life, private or public property, environment or natural resources of the state. The offender in this case is liable to a fine penalty of 10,000,000 (ten million) to 50,000,000 (fifty million) riels or shall be subject to punishment of 1 (one) year to 5 (five) years in prison or to both punishments in addition to repairing the damage or compensation.

c) Philippines:

1. *Philippine Environment Code, 1977. Presidential Decree No. 1152*

Polluters' liability under the *Philippine Environment Code* is based on the polluter pays principles. Section 20 of the Code makes it the responsibility of the polluter to contain, remove and clean-up water pollution incidents at his own expense. In case of his failure to do so, the government agencies concerned are required to undertake the cleaning task and charge the polluter for the cost. Liability here focuses on water pollution.

2. *Philippine Clean Air Act, 1999. Republic Act No. 8749*

In the case of air pollution, Section 18 of the *Philippine Clean Air Act of 1999* has provision for what it referred to as 'Financial Liability for Environmental Rehabilitation'. Under the provision, program and

project proponents are required to put up financial guarantee mechanisms such as trust fund, environmental insurance, surety bonds, letters of credit, as well as self-insurance, to finance the needs for emergency response, clean-up rehabilitation of areas that may be damaged during the program or project's actual implementation. Liability for damages continue even after the termination of a program or project, where such damages are clearly attributable to that program or project and for a definite period to be determined by the authorities.

d) Thailand:

Enhancement and Conservation of National Environmental Quality Act, 1992. B.E. 2535.

Chapter VI of the *Thailand Enhancement and Conservation of National Environmental Quality Act* provides for the Civil Liability of a polluter. The Act identified the forms of damages to include damage to person (bodily harm, death or health injury), damage to public or private property and damage to natural resource. The Act also made an attempt at identifying the entities entitled to any compensation resulting from damages.

In addition to paying all the expenses actually incurred by the government service for clean up, the owner of a point source causing any leakage or contamination is liable to pay compensation or damages thereof except where he proves that the leak or contamination occurred as a result of any of the following elements:

- (1) Force majeure or war;
- (2) Order of the Government or State authorities;
- (3) An act or omission of the person who sustains injury or damage, or of any third party who is directly or indirectly responsible for the leakage or contamination.

Section 97 identifies the State as being the beneficiary of any compensation accruing as a result of destruction, loss or damage to natural resources owned by the State or belonging to the public domain.

e) Vietnam:

Law on Environmental Protection, 1994

The *Vietnam Law on Environmental Protection* was passed on December 27th, 1993 and went into effect on January 10th, 1994. Article 52 of the law makes organizations or individuals whose acts causes damage to the State, other organizations or individuals liable to compensate for the damages and costs of remedying the consequences. It should be noted that Section 53 of the Act, which borders on environmental liability, is enacted to have a

retroactive effect. Under the provision, organizations or individuals that have caused serious damage with long-term adverse impacts on the environment and the health of the people prior to the promulgation of the law, are liable for the damages and the rehabilitation of the environment, according to regulations by the government. The law proffers to deal with polluters under the law in either of two ways – administratively or by criminal prosecution depending on the nature and extent of the infringement and the consequences.

f) **Mongolia:**

Environmental Protection Law 1995

The *Environmental Protection Law of Mongolia* came into force on the 5th of June 1995. Section 37 of the Law provides that citizen, business entities and organizations are liable to compensate for direct damage caused to the environment and natural resources as a result of their unlawful conduct

The Law also allows for citizens, business entities and organizations other than States to bring a claim in court against those in breach of environmental legislation requiring compensation for expenses incurred in restoring destroyed ecological balance and natural resources, evacuation of people, and moving animals and livestock from an area. Under Article 38 of the Law, Citizens, business entities and organizations in breach of the provision of the Law are liable to criminal or administrative penalties in accordance with the nature of the breach and the amount of damage. The fact that compensation has been paid by a person in breach, does not constitute grounds for release from criminal or administrative liability pursuant to relevant legislation.

(vi) **The Pacific**

a) **New Zealand:**

Environment Act 1986

Although New Zealand adopted the *Environment Act 1986*, the Act is of little help in determining the liability of an operator in the country. The Act focussed more on establishing a framework body such as the Ministry of Environment, Parliamentary Commission for the Environment for the protection of the environment

b) **The Cook Islands:**

The Cook Islands Parliament passed legislation allowing the Islands to tap into international conventions and seek funding against marine pollution in local waters.⁶² The legislation basically provides for the prevention of marine pollution, such as the dumping and transportation of other wastes in the Cook Islands' waters by ships and other vessels, even aircraft. It has references to various international conventions as determined by the government's Executive Council. Among the agreements cited include the *1972 London Dumping Convention*; the *1986 Convention the Protection of the Natural Resources and Environment of the South Pacific Region (1986 SPREP Convention)*; the *1969 CLC and 1992 Protocol*; and the *1971 FUND and 1992 Protocol*.

Prevention of Marine Pollution No. 5, 1998.

"Pollution damage," as defined under the Act, includes the costs of reasonable preventive measures taken to prevent or reduce pollution damage. Under Part V of the Act, entitled "Liability and Compensation for Oil Pollution Damage" the owner of a vessel is held liable for pollution damage unless he/she can prove on a balance of probabilities that the damage was caused by an act of war, a natural phenomenon of exception character, by the act or omission done with intent to cause damage by a third party, or by the negligence of the Government or other authority responsible for the maintenance of lights or other navigational aids. Liability is limited to 3 million SDRs for a ship not exceeding 5,000 units of tonnage, and for ships exceeding this weight, liability is limited to 420 SDRs for each additional unit of tonnage. The owner is required to maintain insurance if the vessel is carrying more than 2,000 tonnes of oil in bulk as cargo. Actions must be brought within 3 years from the date which the damage occurred, and in no case shall an action be brought after 6 years from the date of the incident that caused the damage. In addition to being liable to paying for the total cost of a clean up operation necessary to restore the environment to its original condition, offenders can be fined up to half a million dollars or face two years jail for offences under the Act.

The regional laws and regulations regarding environmental liability and compensation have similar basis. A number of Latin American countries have recently enacted amendments to their laws

⁶² "Pacific Islands Counter Oil Spills," *Cook Islands News*. October 4, 1999.

which represent an important development in the region. Most of Latin American legislation provide for different liabilities for individuals and companies, and may impose personal or corporate liability. The most representative legal provisions of the region are thus described below.

(vii) *Latin America & The Caribbean*

In the region it is possible to distinguish three different categories of approaches regarding liability and compensation:⁶³

- Countries, which apply the civil, code rules for environmental damages, for example, Uruguay⁶⁴ and Ecuador.⁶⁵
- Countries with civil code rules which establish specific rules on access to justice, for example Bolivia⁶⁶ and Honduras, and;
- Countries which establish original regimes of environmental liability, for example Argentina,⁶⁷ Brazil, Colombia,⁶⁸ Costa Rica⁶⁹, Chile, and partially Mexico.

a) *Argentina*

In Argentina, paragraph 41 of the Political Constitution (1994) recognizes the right of every individual to a healthy environment as well as standing to sue the restoration of environmental damage to every person (paragraph 43). The Constitution also establishes that environmental damage has as a consequence the duty of restoration.⁷⁰ Nevertheless, the procedure to get restoration is under civil code rules.

b) *Brazil:*

The Brazilian law is one of the most complete in Latin America, because it provides for the entire procedure to claim environmental liability and the compensation criteria. Besides it sets forth severe provisions as to the polluter companies.

Federal Constitution (October 5th, 1988)

Brazilian Constitution refers to environmental liability in article 225, which stipulates that,

Every body has the right to environment in ecological equilibrium, common use good to the people and essential to the quality of life, the public power and the collectivity has the duty to defend and protect these to the present and future generations.

It goes on to state that those who exploit mineral resources have the duty to recover the damaged environment in accordance with the law and regulations set by competent public authorities under the Law.

The conduct and activities against environment subject to the transgressors, civil and juridical people, to the administrative and criminal sanctions with independence of the obligation to repair the damages caused.⁷¹

Another important Law is Act No. 7.347 of 1985 on Civil public action of liability for damages to environment, consumer and goods and rights with artistic, esthetic, touristic, and scenic value (July 24th, 1985)

In accordance with this Law, it is mandatory to restore the environmental damage. The Act No. 7.347 establishes rules on compensation for environmental

⁶³ Most of the information to this chapter has been taken from: González Márquez, José Juan. **Responsabilidad por el daño ambiental en México. El paradigma de la reparación.** México, Miguel Ángel Porrúa- UAM, 2002. 350 pp.

⁶⁴ See Act 16.466 of 1993

⁶⁵ See the Decree 1.802 Establécense las políticas básicas ambientales del Ecuador de 1994"

⁶⁶ See article 102 from the Act 1333 published at the *Gaceta Oficial* of July 15th, 1992. See also: PNUMA-ORPALC. **Legislación ambiental general en América Latina y el Caribe.** México, PNUMA-ORPALC. Serie Legislación ambiental. No. 1, s/a. Pp. 5 a 32.

⁶⁷ See: CASTELLI, Luis. *La obligación de recomponer el daño ambiental en la Constitución Nacional.* En: <http://www.ambiente-ecologico.com/revist51castel51.htm>

⁶⁸ See: GUTIERREZ, Imelda. *La responsabilidad por el daño ambiental en Colombia.* At: **La responsabilidad por el daño ambiental.** México, PNUMA-ORPALC, 1996. pp.169-237.

⁶⁹ SALAZAR, Roxana. *La responsabilidad por daño ambiental en Costa Rica.* En: PNUMA-ORPALC. **La responsabilidad por el daño ambiental.** México, PNUMA-ORPALC, 1996. pp. 239-278.

⁷⁰ KOOLEN, Ricardo. *La responsabilidad por daños ambientales en:* PNUMA- ORPALC. **La responsabilidad por el daño ambiental.** México, PNUMA-ORPAL, 1996. Pp. 49 a 78.

⁷¹ DOS SANTOS, José Vicente. **Meio Ambiente (legislação).** Brasília, Senado Federal, Subsecretaría de Edições Técnicas. 1991. Pp. 10-11.

damages and the procedure to impute environmental liability. It contains two innovative features in the field of the access to justice: the *inquerito civil* and the *ação civil pública*.

Inquerito civil is an administrative procedure enforced by the Prosecutor to investigate and obtain proofs to support the civil public action and the *ação civil pública* is a specific legal action which make possible to join all the collective and public juridical interest involved when the environment is damaged. This action is under the jurisdiction of the prosecutor.⁷²

In addition, this Act establishes a financial Fund to restore the environmental damages. The Fund revenue comes from trial in which class action is executed.⁷³

c) Cuba:

Cuba has established legal provisions that define the necessary actions to protect the environment, as well as the government entities to administer the environmental regulations. The recent actions in Cuba are the creation of the Ministry of Science, Technology and Environment in 1994, the *Environmental Act enacted in 1997*,⁷⁴ and the *Drecreelaw No. 200 enacted in 1998*.

d) Colombia

In Colombia, the Constitution (1991),⁷⁵ recognizes in article 79 the right of every individual to a healthy environment⁷⁶ and in accordance with article 89 the Government has the obligation to prevent and control the activities that cause environmental degradation as well as to demand the restoration of

damages. On one hand the Constitution recognizes to every citizen the right to bring "acciones de tutela" to sue before the court of law as an immediate protection of the constitutional right to healthy environment, which may be caused by action or omission of any public authority. On the other hand, the Constitution (article 88) also establishes the popular right to protect collective interests as the right to healthy environment.

e) Costa Rica

In Costa Rica, there is not yet a specific environmental liability system but the Organic Act on the Environment,⁷⁷ establishes in its article 2^o, that: "Any body who contaminate or damages the environment is liable, in accordance with laws of the Republic and the international agreements adopted". This Act establishes the Environmental Administrative Tribunal which in pursuant to article 111 (c) it has jurisdiction to determine compensation for environmental damages caused by illegal behavior.⁷⁸

In addition, the constitutional reform of 1994 introduced the right of every individual to a healthy environment, as well as the right to bring actions to get the restoration of environmental damages in accordance with the civil code.⁷⁹

f) Chile

In Chile, the Act on General Bases of the Environment (1994)⁸⁰ not only defines environmental damage but it has a specific chapter on environmental liability. This Act distinguishes between the action for environmental damages and the ordinary indemnatory civil action establishes by Civil Code.⁸¹

⁷² HERMAN V. BENJAMIN, Antonio. *A insurreição da aldeia global contra o processo civil clássico apontamentos sobre a opressão e a libertação judiciais do meio ambiente e do consumidor*. En: MILARÉ, Edis. *Ação civil pública*. São Paulo, 1995. Pp. 70-151.

⁷³ MILARÉ, Edis (coord). *Ação Civil Pública*. São Pablo, Editora revista dos tribunais, 1995. 511 pp.

⁷⁴ Rey Santos, Orlando. "La Nueva Ley de Medio Ambiente de Cuba. Un Punto de Partida". In *Revista Electrónica de Estudios Jurídicos*. (The New Cuban Environmental Law. A Start Point. In *Electronic Magazine of Legal Studies*. http://publicaciones.derecho.org/cubalex/Nº_05_Jul-Sept_1998/1

⁷⁵ RAMÍREZ BASTIDAS, Yesid. *El derecho ambiental*. 2^o ed. Bogotá, Ediciones Gustavo Ibañez, 1996. P. 66. See also: Antonio BARRERA CARBONELL. *El acceso a la justicia ambiental en Colombia, que aparece publicado en: PNUMA-ORPALC. Derecho ambiental y desarrollo sostenible. El acceso a la Justicia ambiental en América Latina. Memorias del simposio realizado en la Ciudad de México del 26 al 28 de enero de 2000*. México, PNUMA-ORPALC, 2000. P. 137-138.

⁷⁶ See: GUTIERREZ, Imelda. *La responsabilidad por el daño ambiental en Colombia en: La responsabilidad por el daño ambiental*. México, PNUMA-ORPALC, 1996. P.171.

⁷⁷ Ley No. 7554 del 4 de octubre de 1995.

⁷⁸ ZELEDON, Ricardo. *Código Ambiental*. San José, Editorial Porvenir, 1999. Pp. 25-26.

⁷⁹ SALAZAR, Roxana. *La responsabilidad por daño ambiental en Costa Rica*. En: PNUMA-ORPALC. *La responsabilidad por el daño ambiental*. México, PNUMA-ORPALC, 1996. P. 247.

⁸⁰ Act No. 19.300, on General Bases of the Environment, was published at *Diario Oficial de Chile* of March 9th, 1994.

⁸¹ See: VALENZUELA, Rafael. *Responsabilidad civil por daño ambiental (Régimen vigente en Chile)*, en: PNUMA-ORPALC. *La responsabilidad por el daño ambiental*. México, PNUMA-ORPALC, 1996. Pp. 131 a 167. See also KOKISCH MOUGES, Domingo. *El acceso a la justicia ambiental en Chile*. En: *Derecho ambiental y desarrollo sostenible. El acceso a la Justicia ambiental en América Latina. Memorias del simposio realizado en la Ciudad de México del 26 al 28 de enero de 2000*. México, PNUMA-ORPALC, 2000. Pp. 125-135

Under this Act environmental damages is defined as "all relevant losses, reduction, detriment caused to environment or one of more of its components" and environment is "the global system integrated by natural and artificial elements of physical, chemical, biological, or sociocultural nature and its interactions, in permanent modification by human action and which govern and condition the existence and develop the life in its multiples manifestations."

In case of environmental damage, provisions of specific laws, first must be applied then the Act on General Bases of the Environment and only in supplementary form the civil code.

Under the Act on General Bases of the Environment the defendant has the burden of proof if in accordance with article 52, "...there is any infraction to environmental quality standards, emission standards, environmental plans, regulation for cases of environmental emergency or standards for environmental protection, preservation or conservation set forth in this Act or in other legal or elementary provisions".⁸²

The environmental action can be brought by natural or juridical people, public or private who have suffered the damage or by the municipalities and by the Estate through the Council of Defense.

The procedure governed by this principle includes that the civil action for environmental damages must be brought within five years following the date of evident manifestation of damage.

g) *Mexico:*

In Mexico environmental protection includes federal and local laws and regulations. Although, in 1999 Federal Constitution recognized the right to a healthy environment, the federal legislation does not contain a specific regime for environmental liability.

1. Ecological Equilibrium and Environmental Protection Act of 1988 but as amended in 1996 (*Ley General del Equilibrio Ecológico y Protección al Ambiente (LGEEPA)*)

In contrast, the Mexico City Environmental Act of 2000 establishes a revolutionary regime for environmental liability in which persons who cause environmental damages are liable and must repair the damage and restore environment. The Law

creates the action for environmental damage as a different institution from civil action. The length of time by which an environmental action can be brought to court is within five years from the date when environmental damages happened. Collective or individual persons have the right to bring an action for environmental damages. In consequence the judge must recognize their legal standing although the damage does not affect those people or their property. The restoration must consist in turn up the environmental damage to the same state as it had been before when the damage occurred. In the case of environmental damages, any judge (criminal, civil, administrative, etc.) is competent to decide on action for environmental damage.

The Mexican General Wildlife Act of 2000, follows the frame established by the Mexico City Environmental Act, in relation to the environmental damage, with the difference that the only institution that has standing to bring an environmental action is the Federal Attorney Office for Environmental Protection.

The Act for the Sustainable Development of Colima State of 2002, follows also the pattern of the Mexico City Environmental Act, but introduce an original principle that establishes that the defendant has the burden of proof in cases where he has the ability to produce the environmental damages.]

h) *Brazil:*

The Brazilian law is one of the most complete in Latin America, because it provides for the entire procedure to claim environmental liability and the compensation criteria. Besides it sets forth severe provisions as to the polluter companies.

Environmental Crimes Act No. 9.605 (February 12, 1998)

This law sets forth criminal behaviours regarding the environment to be brought before criminal courts. It includes the criminal liability of companies and establishes as environmental crimes, any other transgressions such as the construction works without the necessary environmental impact and oil pollution assessments. Liability can be claimed regarding the actions of the officers of the company, its legal representative or administration body. Individuals may also incur liability in case they have

⁸² Tomado del texto que aparece en PNUMA-ORPALC. *Legislación ambiental general en América Latina y el Caribe*. Serie de legislación ambiental, suplemento del N°1. México, PNUMA-ORPALC, s/f. P.32.

participated in the action that resulted in a damage to the environment, disregarding the liability of the company. The National System for the Environment (SISNAMA) is responsible for overseeing the protection of the environment, as well as the Harbour's Master Office and the Ministry of Marine. The authority must consider some circumstances in order to establish the kind of penalty to be imposed, such as the reason and consequences of the infringement to public health and the environment.

The sanctions provided for in this law are divided in two categories: for individuals and for companies but there are little differences between them. Such sanctions are imprisonment and the imposition of fines, among others, like community services. The fines are determined by the judge as compensation, considering the damages caused to the injured party and the environment; such amount must be paid directly to the injured party or to the competent authorities, to be applied according to the policies for the protection of the environment. The fine is determined according to the criminal code provisions, and if it is not sufficient to compensate the damage, the judge may increase it up to three times, and the defendant must warrant the payment.

It is important to say that if a company is incorporated with the purpose to allow, facilitate, or hide an environmental crime, an involuntary liquidation procedure will be initiated and its property will be destined to the National Penitentiary Fund.⁸³ This is a very effective way to prevent other companies from even intending to commit a crime against the environment, and to impose liability, because in most cases the companies pay the corresponding fine, but they do not take any measures to prevent pollution.

The punishment compensation provided for in the Brazilian law intends, in the first place to repair the damage to the environment, and in the second place, the damage to the injured party. Once the failure to comply with the legal provisions has been proved, the authority will proceed to take the necessary measures to compensate the damage, for instance, in the case of animals, they are confiscated and then returned to their natural habitat or delivered to zoos or similar institutions.⁸⁴

⁸³ See Section 24 Brazilian Law.

⁸⁴ See Section 25 of the Brazilian Law.

⁸⁵ See Rey Santos, Orlando. *supra* note 74

⁸⁶ See Section 2.1 of the Cuban Act

i) Cuba:

1. *Environmental Act No. 81 of 1997 (Ley de Medio Ambiente)*

This Act sets forth general provisions regarding the environment, *inter alia*, the right of every individual to a healthy environment, as well as the right to information and participation in decision making, and to bring actions before the civil, administrative and criminal courts. It also provides for the instruments of the environmental policy and management such as the Environmental Structure System, the Environmental Information System, and the National Environmental Fund.⁸⁵

1. *1998 Administrative Offenses in Environmental Matters Decree-Law No. 2000 of 1998 (De las Contravenciones en Materia de Medio Ambiente)*

This Decree-Law describes the conduct considered as offenses to the environment. Any individual, national or foreigner, may be prosecuted under this Decree-Law, for causing any damage to the environment.⁸⁶ The sanctions provided in this Decree-Law are imposed considering the circumstances of each offence. As it is provided in the above mentioned legal provisions, this Decree-Law provides for the payment of fines, which must be paid and warranted by the offender.

The general provisions of this Decree-Law include the failure to comply with the process of environmental impact assessment and the environmental inspections procedure. It also sanctions activities affecting biodiversity, coastal areas, the atmosphere, the production of hazardous materials without the corresponding authorization, and failure to protect wildlife and endangered species. The authorities empowered to impose the penalties according to this Decree-law are the State Chief of Environmental Inspections, and the Ministry of Science, Technology and Environment of the Republic of Cuba.

j) Mexico:

1. *1996 Ecological Equilibrium and Environmental Protection Act (Ley General del Equilibrio Ecológico y Protección al Ambiente (LGEEPA))*

The law warrants the right of every individual to live in a healthy environment for his/her development, health and welfare. It defines the principles of the environmental policy and the instruments for its application and provides for the preservation and protection of biodiversity, as well as to establish and manage the protected areas, the sustainable use, preservation and restoration of, water and other natural resources, in order for the economic benefits and activities of the society, to be compatible with the preservation of ecosystems (sustainable development).

The Act establishes in article 203 the administrative procedure to claim environmental liability, against any person who pollutes or damages the environment, natural resources or biodiversity. Environmental liability matters are brought to the attention of the Environmental Protection Attorney General's Office (PROFEPA) of the Ministry of Environment and Natural Resources, which is responsible for the implementation of the measures to protect the environment. If the PROFEPA is aware of any crime under the Federal Criminal Code committed by any individual or company, it may initiate the respective criminal action before the Public Prosecutor, and any citizen who becomes aware of environmental crimes has the right to report to the Public Prosecutor or initiate such action.⁸⁷

2. *Mexican Criminal Code, as Amended in 1996 (Código Penal Federal)*

As amended in 1996, this Code includes a new chapter on environmental transgressions according to which these offences are criminally punished. These offences used to be sanctioned by the specific laws, but the Mexican Government decided to compile all them in one legal body (the Criminal Code), in order to strengthen the environmental laws and regulations and instruments of the environmental policy⁸⁸.

The competent authority to resolve a criminal environmental procedure is the Attorney's General Office through the Specialized Environmental Crimes Bureau. One of the characteristics of the amendments made in 1996, is that a judge is empowered to impose additional penalties

depending on the nature of the crime. As in the Brazilian legislation, the Mexican Code considers the representatives of companies as personally liable for a crime, but in case of liquidation of a company, although it is provided in the Criminal Code, the Procedural Code does not have related provisions, which makes it impossible to impose punishment.⁸⁹

k) Paraguay:

Paraguay defines damage in Section 1835 of the *Civil Code*, but refers only to damages to individuals and certain rights and goods. However it does not provide for damages to undefined individuals, rights or goods, such as the environment. As a consequence the civil procedure is not sufficient to claim environmental liability. In fact there has been no case brought before the civil courts in the country regarding environmental liability.⁹⁰

1. *Constitution of Paraguay*

Section 7 of the Constitution provides for the right to live in a healthy and balanced environment. The preservation, conservation and improvement of the environment is the main objective of the State and the society, as well as its integration in the human development. Section 8 of the Constitution provides that the activities that may cause an impact to the environment must be governed by the law, and that the competent authorities can prohibit or prevent any activities they shall deem extremely hazardous, and that all damage to the environment must be repaired. These constitutional provisions are included in the Wildlife Act No. 96/92 which considers that the protection and conservation of wildlife is a matter of public interest (Section 4.)⁹¹

2. *1995 Crimes Against the Environment Act 716*

This Act only refers to criminal liability regarding the protection of the environment, but it does not specify the procedure to claim such liability, neither the competent authorities to resolve these cases. The following activities are considered as crimes against the environment: (a) Activities that endanger the environment in general; (b) the use of nuclear, chemical and biological weapons without

⁸⁷ See Sections 182 and 188 LGEEPA

⁸⁸ Quintana Valtierra, Jesús. *Derecho Ambiental Mexicano, Lineamientos Generales*. PORRÚA: Mexico, 2000. (*Environmental Mexican Law. General Guidelines*)

⁸⁹ See Quintana Valtierra. *Ibid.* and Sections 11 and 252 of the Criminal Code.

⁹⁰ Laterza, Gustavo, "Responsabilidad por el Daño Ambiental en Paraguay". In *La Responsabilidad por el Daño Ambiental*. Serie de Documentos Sobre Derecho Ambiental No. 5. PNUMA ORPALC. ("Liability for Environmental Damage in Paraguay". In *The Liability for Environmental Damage*. Document Series on Environmental Law No. 5 UNEP ROLAC)

⁹¹ See Laterza G. *Ibid.*

authorization; (c) unauthorized disposal of hazardous and toxic wastes; (d) activities that endanger the forests, trees, and protected areas; (e) water pollution by any means, including spills of industrial wastes without the corresponding treatment; (f) activities that damage wildlife and endangered species, genetic handling without authorization of the competent authorities; (g) any false statements to the authorities regarding studies and assessments of the environmental impact; (h) failure to comply with the provisions of the regulations regarding hunting, fishing, recollection and habitat preservation of endangered or local species; (i) emission of pollutants to the atmosphere contravening the provisions of the environmental law; and (j) construction works in protected areas, failure to comply with the legal provisions regarding the prohibition season and zoo and phytosanitary quarantines.

The punishment by this Act includes imprisonment and fines, although there are no specific provisions regarding the application of the fines, or specific amounts which court can impose. The general practice has been that, if a person files the claim before the competent authorities, he or she will be entitled to the indemnity, but in the case of a collective claim, the fine will be applied to a public fund for repairing the environment⁹².

1) Venezuela:

The environment is considered as a public interest issue. Its damage is deemed an unlawful action in the Venezuelan society, that might be brought before the civil, criminal and administrative courts, as the case may be. Upon demand of the Prosecutor, action may be brought by community associations or other environmental associations or institutions, or even any individual who considers that the environment is being damaged.

1. 1976 Environmental "Frame" Act (*Gaceta Oficial No. 4.358 Ley Orgánica del Ambiente*)

This act does not define the term environmental damage, it only provides for the conservation, defense and improvement of the environment is of a

public interest (Section 2). It also establishes a list of the policies and instruments for environmental protection and the activities that may cause a damage to the environment (Section 20.) The judge must determine the evaluation of the environmental damage considering the circumstances of each case.⁹³

2. 1992 Criminal Environmental Act (*Ley Penal del Ambiente*)

This act defines the criminal offenses against the environment and provides for the respective penalties. It establishes the liability of both individuals and companies (including government entities). Any person is entitled to report any environmental crimes to the competent authorities. Damage indemnity is considered of a public interest.⁹⁴ The court of the case will determine the amount of the fines and warranties to be granted by the transgressor. The payment of the indemnity has priority over any other obligations of the transgressor. These fines will be paid to the Ministry of Environment and applied to repair and compensate the damages caused to the environment.

The court will appoint three experts, who may be individuals or scientific or research institutions to determine the amount of the damages. This Act also provides for sanctions regarding water pollution, including underground sea and coastal waters, and prohibits oil spills in such areas. It also includes provisions regarding the protection of soil and against atmospheric pollution through gas and radiation emissions. Regarding the protection of wildlife, it sanctions hunting, fire, unauthorized occupation of the protected areas and damage to the natural monuments. These crimes must be brought before criminal courts. The Act provides that the Executive Power shall create an environmental police department authorized to enforce this Act in any criminal action.⁹⁵ This Act establishes a special treatment for farmers and native communities, i.e. they will not be considered liable in case their activities are related to some activities considered as crimes according to the Act, provided, however that they shall comply with the technical criteria of environmental preservation.

⁹² See Gustavo Laterza, *Ibid*.

⁹³ Blanco-Urbe Alberto, "La Responsabilidad por el Daño Ambiental en Venezuela". In *La Responsabilidad por el Daño Ambiental*. Serie de Documentos Sobre Derecho Ambiental No. 5. PNUMA ORPALC. ("Liability for Environmental Damage in Venezuela". In *Liability for Environmental Damage*. Documents Series on Environmental Law No. 5. UNEP ROLAC)

⁹⁴ See Section 16 of the Criminal Act.

⁹⁵ See Section 22 of the Criminal Act.

4. CASE LAW

Overall, the case law in this area suggests that courts at both international and national levels are showing a general willingness to define environmental damage in broad terms. This being said, the definition of environmental damage as well as details regarding the threshold at which liability is imposed and methods of determining of the costs of reparation are still in need of clarification. All of the cases referred to below are decisions of the International Court of Justice (ICJ),⁹⁶ with the exceptions being the *Patmos case* from the Italian Court of Appeal and the *S.S. Zoe Colocotroni* case.

1. *Trail Smelter Arbitration*⁹⁷

This is generally regarded as a landmark case in the history of environmental law in the sense that the principles articulated in it lay down the foundation for the subsequent development of international environmental law and customary international law. The dispute arose as a result of damage occurring in the territory of the U.S.A. due to sulfur dioxide fumes emitted from a smelter situated in Canada. The US claimed that the height of the stacks increased the area of damage in the US. The tribunal held that not every kind of transboundary environmental injury falls within the scope of environmental damage, and in the absence of substantial, legally provable damage to the environment, State responsibility does not arise. The tribunal also found that no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another person when “the case is of serious consequence and the injury is established by clear and convincing evidence.” Accordingly, the Trail Smelter was required to refrain from causing any damage through fumes to the US, and the tribunal determined the quantum of environmental damage using the market value approach.

2. *Lac Lanoux Arbitration*⁹⁸

In this case, Spain alleged that industrial plans proposed by France would adversely affect Spanish rights and interests contrary to the Treaty of Bayonne, 1866 which permitted the joint use of the Carol River. The tribunal’s decision was based on interpretation of this specific treaty, however, in its analysis it defined environmental damage broadly, as “evidenced by changes in the composition, temperature and other characteristics of the river.”

⁹⁶ See www.icj-cij.org/

⁹⁷ (U.S.A. v. Canada), 1938-1941, 9 I.L.R. 315

⁹⁸ (France v. Spain), 1957, 24 I.L.R. 101.

⁹⁹ (Australia v. France), I.C.J. Rep. (1973) 99, (1974) 253.

¹⁰⁰ (Canada v. U.S.S.R.) 1979, 18 I.L.M. 899.

In its award, the Tribunal stressed that the exclusive jurisdiction of a State’s activities in its own territory finds its limits in the rights of other States. This was a clear repudiation of the theory of absolute sovereignty, known as the Harmon doctrine. However, in the end the tribunal determined that the French project did not violate the treaty or any other rule of international law, finding that there was no serious injury to Spanish interests.

3. *The Nuclear Tests Cases*⁹⁹

France had conducted atmospheric tests of nuclear weapons which released radioactive matter into the atmosphere, and Australia asserted that these tests caused some fallout of radioactive matter to be deposited on its territory. It asked the ICJ for a declaration and an order that France not carry out further tests. In reaching its decision the ICJ made it clear that not every transmission of a chemical or other matter into another State’s territory, or into the global commons, will create a legal cause of action in international law.

4. *Cosmos 954*¹⁰⁰

This is the first and only case handled under the 1972 *Space Objects Liability Treaty*. It involved the re-entry of a Russian satellite, with a nuclear power source, over a remote area of Canada. The object broke up on re-entry, spreading radioactive debris over the surrounding area. Following Art II of the Convention, Russia was absolutely liable, but the question arose as to the level of damages. Canada quantified them at \$14 million for the clean-up operation that took place, claimed \$6 million, but settled for \$3 million. Environmental damage therefore seems to be covered to a limited degree in this respect, because of the lack of damage to any specific economic interests. However, it should be noted that the radioactive nature of the debris necessitated a clean up operation to prevent further harm. Whether such restitution would be possible in differing circumstances remains unclear, since the Convention does not include environmental damage in its definition of damage. Related to this issue is the problem of quantifying environmental damage and whether there is a limit to claims. *Cosmos 954* indicates that a limit may exist, because Canada did not claim for the full amount they said the clean-up operation cost, nor did they settle for the amount claimed.

5. *Commonwealth of Puerto v. S.S. Zoe Colocotroni*¹⁰¹

The crew of a grounded barge discharged crude oil in order to lighten the vessel and free her from the reef upon which she had grounded. The oil slick found its way to a bay off the Puerto Rican coast and damaged a public mangrove forest located in a wetland area. The Commonwealth of Puerto Rico and the Environmental Quality Board (EQB) filed an action in admiralty claiming as damages, among other things, monies to restore the mangrove forest. In the opinion of the Court, the appropriate standard was the cost of restoration or rehabilitation of the affected area to its pre-existing condition without grossly disproportionate expenditures. Should this not be possible, an alternative measure of damages could be "the reasonable cost of acquiring resources to offset the loss." While the replacement value of destroyed species was not accepted as an appropriate standard in this case, it was suggested that the cost of replanting was a reasonable approach. This case also suggested that rehabilitation of an area to its preexisting condition and the replenishment of damaged biological resources could be considered as standards of compensation in the context of international regimes.

6. *The Patmos Case (General Nation Maritime Transport Co v. The Patmos Shipping Co.)*¹⁰²

The Italian government claimed for ecological damage to the marine flora and fauna as a result of a collision between the Greek tanker *Patmos* and a Spanish tanker in the Strait of Messina which caused oil to spill into the sea. The Italian Court of Appeal interpreted the 1969 *CLC* broadly to include environmental damage as "everything which alters, causes deterioration in or destroys the environment in whole or in part."

7. *Case Concerning the Gabcikovo-Nagymaros Project*¹⁰³

This case arose out of a treaty signed in 1977 between Hungary and Czechoslovakia that provided for the construction and operation of a barrage system on the section of the Danube River. Part way through construction, Hungary abandoned the works and terminated the treaty after the Czech section was almost complete. Hungary relied on the "state of ecological necessity" as justifying its termination of the treaty citing impaired water quality and

eutrophication as ecological risks the project posed to the river. The "state of ecological necessity" is the situation of a State whose sole means of safeguarding an essential interest threatened by a grave and imminent peril is to adopt conduct not in conformity with what is required of it by an international obligation to another State. The court held that for the "state of ecological necessity" to apply the existence of a peril must be grave and imminent; the mere apprehension of a possible peril will not suffice. The environmental dangers highlighted by Hungary were mostly of a long-term nature and were uncertain, and even if Hungary could have proved the project would have cause grave peril for the environment in the area, the peril was not imminent when Hungary abandoned the work.

8. *M. C. Mehta v. Kamal Nath and others*¹⁰⁴

In 1981 the Indian Government leased an area of land near the bank of the Beas river to Span Motels Pvt. Ltd. The lease area was further extended in 1994 (this extension was described as suspicious). In developing the land area for business purposes Span Motels Pvt. Ltd. built a motel on the bank of the river and in the process diverted the course of the river by creating a new channel for the flow of the river. It claimed that the diversion was aimed at preventing flooding.

The Supreme Court held in the case that the extended land area should revert to the government and that the government should proceed to restore the river channel and its environment to its original condition. The court also held Span Motel liable for the cost of such restoration. Span Motel was also required to show course why a fine should not be imposed upon it pursuant to the polluter pays principle.

9. *India Council For Enviro-Legal Action v. Union of India*¹⁰⁵

In this case a number of chemical industrial plants operating in the Bichiri village, Udaipur District, Rajasthan were found to be operating without permits nor adherence to effluent discharge standard. The plants were producing toxic chemicals including oleum, single super phosphate and highly toxic 'H' acid. The Plants discharged toxic effluents emanating from their operation into the surrounding environment thereby polluting the land and water aquifers.

¹⁰¹ 456 F. Supp.1327 (1978); 628 F.2d 652 (1980)

¹⁰² Court of Messina, 1st Civil Division (Italy), 30 July 1986.

¹⁰³ (Hungary v. Slovak Republic), 32 ILM (1993) 1293.

¹⁰⁴ Supreme Court of India (1997) 1 Supreme Court Cases 388. Kuldip Singh, J.

¹⁰⁵ Supreme Court of India (1996) 3 SCC 212 B. P. Jeevan Reddy, J., and B.N. Kirpal, J.

The Supreme court in its decision held the Plants liable for the cost of improving and restoring the environment affected in the Bichiri village, Udaipur District, Rajasthan. The court allowed both the Central Government of India and the villagers to proceed against the plants in the appropriate civil courts to claim damages. The court further ordered the closure of the Plants.

10. *Vellore Citizens Welfare Forum v. Union of India*¹⁰⁶

Vellore Citizens Forum brought an action to stop tanners operating within the State of Tamil Nadu from discharging untreated effluent into agricultural fields, waterways, open lands and waterways. It is estimated that nearly 35,000 hectares of agricultural land in the tanner's belt had become polluted and unfit for cultivation at the time of this action.

The court directed the Central Government to establish an authority to deal with the situation

created by the tanners. It directed the authority to implement the precautionary principle, and identify the (1) loss to the ecology/environment; and (2) individuals/families who have suffered because of the pollution, and then determine the compensation to reverse the environmental damage and compensate those who have suffered from the pollution. The Collector/District Magistrates shall collect and disburse the money.

The Court directed that where a polluter refuses to pay compensation, his industry should be closed, and the revenue recovered as areas of land revenue. Also even if an industry sets up the necessary pollution control devices now it is still liable to pay for the past pollution it has generated. The Supreme Court went further to fine each of the industries the sum of Rupees 10,000 each to be put into an Environment Protection Fund and be used to restore the environment and to compensate affected persons.

¹⁰⁶ Supreme Court of India AIR 1996 SC 2715 Kuldip Singh, J., Faizan Uddin, J., and K. Venkataswami, J .

5. AGREEMENTS REFERRING TO ISSUES RELATED TO LIABILITY & COMPENSATION

There are also numerous global and regional agreements that refer to the issues of liability and compensation, and to the "polluter pays" principle. However, these agreements do not actually address specific liability issues nor do they establish specific liability regulations; they merely incorporate existing rules of civil liability into the existing convention. The relevant sections or articles referring to liability and compensation for these agreements are reproduced below.

5.1 Identified Global Regimes

1. *1967 Helsinki Rules (The Helsinki Rules on the Uses of the Waters of International Rivers); adopted by the International Law Association August 1966.*

Articles IX, X, and XI codify the current customary international water law on the use and pollution of the waters of an international drainage basin as adopted by the International Law Association (ILA). Under *the Helsinki Rules*, a State is liable for serious injury only if the polluting use does not fall within its right to a reasonable and equitable share in the beneficial uses of the waters of the basin. In the case of a violation, the State responsible shall be required to cease the wrongful conduct and compensate the injured co-basin State for the injury that has been caused to it. If a State fails to take reasonable measures, it shall be required to promptly enter negotiations with the injured State with a view towards reaching a settlement equitable under the circumstances. Under this legal framework, there is no strict liability for pollution unless a State assumes it by treaty.

2. *1972 London Dumping Convention (Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London)); adopted 29 December 1972, in force on 30 August 1975.*

The objective of this Convention is to control pollution of the sea by dumping and to encourage regional agreements supplementary to the Convention. In article 10, it is stated that in accordance with the principles of international law regarding State responsibility for damage to the environment of other States or to 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

regarding dumping. It should be noted that this Convention will be replaced with *the 1996 Protocol* once it enters into force. Article 15 of *the 1996 Protocol* contains an almost identical provision to that found in *the 1972 Convention*, adding that Parties undertake to develop procedures regarding liability arising from the dumping or incineration at sea of wastes or other matter.

3. *1982 UNCLOS (United Nations Convention on the Law of the Sea (Montego Bay)); adopted 10 December 1982, in force on 16 November 1994.*

This Convention governs all aspects of ocean space, such as delimitation, environmental control, marine scientific research, economic and commercial activities, transfer of technology and the settlement of disputes relating to ocean matters. It contains 2 provisions that address State liability for environmental damage. First, in article 139(2), in respect of an area (such as sea-bed, ocean floor, or subsoil beyond the limits of national jurisdiction) damage caused by the failure of a party to carry out its responsibilities shall entail liability. Secondly, in article 235(1), in respect of obligations concerning the protection and preservation of the marine environment for which States are responsible, they shall be liable in accordance with international law. Under this section, States also must ensure that recourse is available in their legal systems for prompt and adequate compensation for damage caused by pollution of the marine environment. Under article 235(3), States are to cooperate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and compensation for damage, as well as the development of procedures for payment of adequate compensation such as compulsory insurance or compensation funds.

4. *1982 Montreal Rules (Montreal Rules on Water Pollution in an International Drainage Basin); adopted 1987.*

The Montreal Rules, likewise adopted by the ILA, follow the equitable tenet set out in *the Helsinki Rules*. Article 9 of the Rules requires States to pay compensation on the basis of reparation to the environment. However, these are only recommendations and do not carry the weight of law, except for those European States which have adopted the rules under another international or national legal framework.¹⁰⁷

¹⁰⁷ Jones, P. "The Polluter-Pays Principle and the EC Proposal on Environmental Liability: Anything New for Protecting the Ecosystems of Europe's International Watercourses?" Center for Energy, Petroleum and Mineral Law and Policy Review Article 9. 2000. www.dundee.ac.uk/cepmlp/car/html/car4_art9.htm

5. *1992 CBD (1992 Convention on Biological Diversity); adopted 22 May 1992; in force on 29 December 1993.*

The objectives of the Convention include the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. Article 3 of the Convention confirms a State's sovereign right to exploit its own resources pursuant to its own environmental policies, but then goes on to provide that "States have...the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States." Although the Convention does not set forth any explicit liability rules, it does provide a procedure to examine this issue. In article 14(2) it states, "the conference of the Parties shall examine, on the basis of studies to be carried out, the issue of liability and redress, including restoration and compensation, for damage to biological diversity, except where such liability is a purely internal matter. Accordingly, the Conferences of the Parties to the Convention and the Open-ended Ad Hoc Working Group on Biosafety addressed this issue in the *2000 Cartagena Protocol on Biosafety* (see below).

6. *1996 Private Law Remedies (Articles on Private Law Remedies for Transboundary Damage of International Watercourses, Helsinki); adopted 1996*

The most applicable work of the ILA on liability can be found in the Articles on Private Law Remedies. In substance, the recommendations impose obligations on States to give equal access to administrative and judicial remedies for persons who are damaged by the inequitable or unreasonable use of the waters of an international drainage basin. Article 1 defines damage to include personal injury, property loss and damage to the environment including reparation. Equal access to information, preventive measures and relief for individuals and non-governmental organizations are set out in Articles 2 and 3. However, the articles do not specifically identify the type of liability imposed nor do they specifically address the polluter pays principle.

7. *1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses; adopted 21 May 1997, but not yet in force.*

This Convention applies to the uses of international watercourses and waters for purposes other than navigation and to measures of protection, preservation and management related to the use of watercourses. The concept of State liability is referred to under Article 7, in which States are under a general obligation not to cause significant harm to other

watercourse States. Where significant harm is caused, the State which causes the harm shall take all appropriate measures to eliminate or mitigate the harm and to "discuss the question of compensation."

8. *2000 Cartagena Protocol (Cartagena Protocol on Biosafety to the Convention on Biological Diversity); adopted 23 February 2000, but it is not yet in force.*

The objective of this Protocol is to ensure an adequate level of protection in the safe transfer, handling, and use of living modified organisms that may have adverse effects on biological diversity, specifically focusing on transboundary movements. Under the heading "liability and redress" in article 27, it states that at their first meeting the Parties shall adopt a process with respect to the appropriate elaboration of international rules and procedures in the field of liability and redress for damage resulting from the transboundary movements of living modified organisms (LMOs). It is noted that the Parties shall endeavor to complete this process within four years. The process of the development of the rules has already been initiated by the Intergovernmental Committee for the Cartagena Protocol on Biosafety (ICCP). ICCP is currently in the process of reviewing and analysing on-going processes in international law, reviewing existing relevant instruments. It is also identifying elements to propose for the elaboration of international rules and procedures in the field of liability and redress for damage resulting from transboundary movement of LMOs as mandated in Article 27 of the Protocol.

9. *Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters; adopted at Kiev on 21 May 2003 but not yet in force.*

The Protocol provides a comprehensive regime for civil liability in Europe and intends to implement two regional conventions, namely, Convention on the Protection and Use of Transboundary Watercourses and International Lakes as well as Convention on the Transboundary Effects of Industrial Accidents. It accords individuals affected by the transboundary impact or effects of industrial accidents on international watercourses, a legal claim for adequate and prompt compensation. The Protocol will, therefore, apply to damage caused by the transboundary effects of an industrial accident on transboundary waters. It will, however, apply only to damage suffered in a Party other than the Party where the industrial accident has occurred. It sets out strict liability measures that operators or companies will be liable for damage caused by an industrial accident including installations or transport through pipelines. Fault-based liability is equally granted under the Protocol. Subject to national laws applicable on liability of servants or

agents, an individual shall be liable to damage caused or contributed by his or her wrongful, intentional, reckless or negligent acts or omissions. Physical damage, damage to property, loss of income, cost of reinstatement as well as response measures are equally covered under the Protocol.

To ensure its effective implementation, Parties are obliged to adopt legislative, regulatory and administrative measures as necessary, and accordingly inform the secretariat, the actions taken to implement the Protocol. Parties are also expected to provide access to information and access to justice, as appropriate, so as to promote the objective of the Protocol. The Protocol sets financial limits of liability depending on the risk of the activity. For instance: quantities of hazardous substances that are or may be present and their toxicity or the risk they pose to the environment. However, there shall be no financial limit on fault-based set limits. Fifteen years from the date of the industrial accident has been set as the time limit within which claims for compensation can be entertained and three years from the date the claimant knew or ought to have known of the damage and of the person liable.

To cover such liabilities, the operators or companies will have to establish financial securities, such as insurance, bonds or other guarantees including financial mechanisms providing compensation in the event of insolvency. The Protocol also guarantees non-discrimination of victims of transboundary effects since they will not be treated less favourably than victims from the country where the accident has occurred. The Protocol, in fact, encourages companies or operators to take measures to prevent damage since they will henceforth be liable. Consequently, the Protocol will indeed prevent accidents happening in future and hence will limit adverse effects not only on people but also the environment. No reservation is permitted to be made under the Protocol.

The Protocol will enter into force once 16 States have ratified or acceded to it.

5.2 Identified Regional Regimes

5.2.1 UNECE:

The United Nations Economic Commission for Europe (UNECE) is one of five regional commissions of the United Nations, and it represents one of the most economically and industrially developed regions of the world. UNECE's 55 member States are

responsible for two thirds of the world's pollution, and are among the biggest consumers of natural resources and energy.¹⁰⁸ As such, the UNECE has quite recently developed a component of regional treaties with relevant provisions relating to liability and compensation which are summarized below.

1. **1991 Environmental Impact Assessment (UNECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo)); adopted 25 February 1991, in force on 10 September 1997.**

The objective of this Convention is to enhance international cooperation in assessing environmental impact in particular in the transboundary context. Although this convention does not contain an *expressis verbis* reference to liability and compensation, it requests Parties to notify and to enter into consultation with the affected Party concerning, *inter alia*, the potential transboundary impact of the proposed activity and measures to reduce or eliminate its impact (Article 3).

2. **1992 Watercourse Convention (UNECE Convention on the Protection and Use of Transboundary Watercourse and International Lakes (Helsinki)); adopted 17 March 1992, in force on 6 October 1996.**

The objective of this Convention is to strengthen national and international measures to prevent, control, and reduce the release of hazardous substances into the aquatic environment, to abate eutrophication and acidification, as well as to prevent the pollution of the marine environment and coastal areas from land-based sources. In articles 2 and 3 it states that Parties shall be guided by the polluter-pays principle, and that they shall develop, adopt and implement relevant legal, administrative, economic, financial or technical measures in order to ensure the emission of pollutants is prevented and transboundary waters are protected. In article 7, there is a general mandate for the Parties to support appropriate international efforts to elaborate rules, criteria and procedures in the field of responsibility and liability.

3. **1992 Industrial Accidents (UNECE Convention on the Transboundary Effects of Industrial Accidents (Helsinki)); adopted 17 March 1992, in force on 19 April 2000.**

The objective is the prevention of and response to industrial accidents causing transboundary effects through mutual assistance, research and development, and the exchange of information and technology. The polluter pays principle is mentioned

¹⁰⁸ See www.unece.org/, *supra* note 19.

in the preamble of the Convention, and under Article 13, the Parties are called to support appropriate international efforts to elaborate rules, criteria and procedures in the field of responsibility and liability. An identical provision to this one is also found in *the 1992 Watercourse Convention*.

A new legally binding instrument in the form of a Protocol is being developed on liability and compensation for damage resulting from the transboundary effects of industrial accidents on transboundary waters by the member States of the UNECE. The Protocol will, in particular, implement relevant provisions of two UNECE instruments, namely, article 7 of the 1992 Water Course Convention and article 13 of the 1992 Industrial Accidents Convention. It is expected that the Protocol will be ready for adoption at the next Ministerial Conference, "Environment for Europe," scheduled to take place in Kiev in May 2003.¹⁰⁹

4. 1998 Convention on the Protection of the Environment Through Criminal Law (Strasbourg), adopted in 1998, but not yet in force.

This Convention outlines a procedure for establishing criminal sanctions for intentional, negligence and administrative offences pertaining to the discharge, disposal, transport, and manufacturing of substances into the air, water, or soil which causes death or serious injury or create a serious risk. Moreover, the Convention provides not only for sanctions but also an obligation to reinstate the environment, and stipulates that corporate liability shall not exclude criminal proceedings.

5. 1998 Aarhus Convention (Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus)); adopted 25 June 1998, in force on 30 October 2001.

This Convention aims to guarantee the rights of access to information, public participation in decision making, and access to justice in environmental matters in order to contribute to the protection of the right of every person of present and future generations to live in an environment adequate to his/her health and well-being. Such rights, which are also provided under *the 1993 Lugano Convention*

as well as *the 1992 UNECE Watercourse Convention*, relevant especially to the victim regarding its burden of proving a causal link between the act and the resulting damage, are further specified in this Convention.

6. 1999 Protocol on Water and Health (Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourse and International Lakes (London)); adopted 17 June 1999, but not yet in force.

The objective of this Protocol is the protection of human health and well-being through improving water management, including the protection of water ecosystems, and through preventing, controlling and reducing water-related diseases. In implementing this Protocol, the Parties shall be guided by the polluter-pays principle by virtue of which costs of pollution prevention, control and reduction shall be borne by the polluter (Article 5).

5.2.2 The Regional Seas Conventions

The UNEP Governing Council designated "oceans" among the priority areas in which activities are to be developed, and the early meetings of the Governing Council endorsed a regional approach to the control of marine pollution and management of marine and coastal resources. Consequently, in 1974 the Regional Seas Programme of UNEP was initiated.¹¹⁰

The Regional Seas Programme is aimed at developing treaties and other rules and standards to protect the marine environment of marginal seas of the world. The program now covers more than 13 regional areas, covering over 140 coastal States and territories, with over 29 conventions and protocols.¹¹¹ This program is also linked to the Global Programme of Action of for the Protection of the Marine Environment from Land-based Activities (GPA). In 1995 UNEP was designated as the secretariat of GPA, which aims at preventing the degradation of the marine environment from land-based activities by facilitating the realization of the duty of States to preserve and protect the marine environment.¹¹²

It should be noted that all the treaties listed below include similar provisions that stress the need for either *cooperation* and / or *the development* of rules and

¹⁰⁹ "Civil Liability: Agreement reached on new legally binding instrument." Press Release, Geneva, 4 July 2001 at www.unece.org/press/pr2001

¹¹⁰ *Status of Regional Agreements Negotiated in the Framework of the Regional Seas Programme*, United Nations Environment Programme. Nairobi, 1994.

¹¹¹ See www.unep.org/Sitelocator/#RegionalSeasProgrammes

¹¹² *Evaluation of Project FP/GN/1100-98-11: GPA*. United Nations Environment Programme, September 2000.

procedures in the field of liability and compensation. The conventions are grouped according to regions.

5.2.2.1 Africa

1. *1981 West and Central African Convention (1981 Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan)); adopted 23 March 1981, in force on 5 August 1984.*

The aim of this Convention is to ensure cooperation among the Contracting Parties to promote sustainable, environmentally-sound development through a coordinated comprehensive approach. Accordingly, article 15 states that Parties shall cooperate in the formulation and adoption of appropriate rules and procedures for the determination of liability and the payment of adequate and prompt compensation for damage resulting from pollution of the Convention area.

2. *1985 Eastern African Convention (Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi)); adopted 21 June 1985, in force on 30 June 1996.*

The objective of this Convention is to protect and manage the marine environment and coastal areas of the Eastern African region. Article 15 calls for Parties to agree to cooperate in the development of rules and procedures to govern liability and compensation for damage caused by pollution in the Convention area.

5.2.2.2 The Middle East

1. *1978 Kuwait Convention (Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution); adopted 24 April 1978, in force on 1 July 1979.*

The objective of this Convention is to prevent, abate and combat marine pollution in the Gulf Region. Article XIII calls for Parties to cooperate in establishing appropriate rules and procedures for the determination of civil liability and compensation for damage resulting from the pollution of the marine environment.

2. *1990 Kuwait Protocol (Protocol for the Protection of the Marine Environment Against Pollution from Land-Based Sources); adopted 21 February 1990, in force on 2 January 1993.*

Article XIII on responsibility and liability for damage calls for Parties to ensure that recourse is available for prompt and adequate compensation in respect

of damage caused by pollution of the marine environment. It also states that Parties should formulate and adopt appropriate procedures for the determination of liability for damage resulting from pollution from land-based resources.

5.2.2.3 Asia & The South Pacific

1. *1982 Jeddah Convention (Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (Jeddah)); adopted 14 February 1982, in force on 20 August 1985.*

The objective of this Convention is to ensure the rational human use of marine and coastal resources. Article XIII calls for Parties to agree to cooperate in the formulation and adoption of appropriate rules and procedures regarding civil liability and compensation for pollution damage. This agreement also provides for sovereign immunity, in which warships and other vessels owned or operated by the state used for non-commercial service are exempt from the Convention.

2. *1986 SPREP Convention (Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Noumea)); adopted 24 November 1986, in force on 22 August 1990.*

This Convention seeks to ensure that resource development is in harmony with the maintenance of the environmental quality of the region and the evolving principles of sustained resource management. Article 20 calls for Parties to cooperate in the formulation and adoption of appropriate rules and procedures in conformity with international law in respect of liability and compensation for damage resulting from pollution of the Convention area.

5.2.2.4 Latin America & The Caribbean

1. *1981 South-East Pacific Convention (1981 Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific (Lima)); adopted 12 November 1981, in force on 19 May 1986.*

Its aim is to protect and preserve the marine environment and coastal area of the South-East Pacific against all types and sources of pollution. Article 11 states that Parties shall endeavor to formulate and adopt appropriate procedures for determining civil liability and compensation for damage resulting from pollution of the marine environment and coastal areas. The Convention also states that Parties shall ensure that recourse is available within their legal systems for compensation for such damage.

2. **1983 Cartagena Convention (1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena)); adopted 24 March 1983, in force on 11 October 1986.**

The objective is to protect and manage the marine environment and coastal areas of the wider Caribbean region. Article 14 states that Parties should adopt appropriate rules and procedures related to liability and compensation for damage resulting from pollution of the Convention area.

5.2.2.5 Europe

1. **1974 Baltic Sea Convention (Convention for the Protection of the Marine Environment of the Baltic Sea Area); adopted 22 March 1974, in force on 3 May 1980.**

This Convention was adopted with the objective of reducing the principal sources of marine pollution, namely land-based pollution, waste dumping at sea and pollution through shipping, as well as seeking to improve scientific control of pollution in the Baltic Sea. The Convention includes a general provision in Article 17 that Contracting Parties should cooperate to develop and accept rules concerning responsibility for damage resulting from acts or omissions in contravention of this Convention including, *inter alia*, the limits of responsibility, criteria and procedures for the determination of liability, and available remedies.

This Convention will be replaced by the 1992 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area once that Convention enters into force. Article 25 of the 1992 Convention contains a similar provision addressing issues of civil liability. Overall, this convention contains new elements and provisions, as well as a new approach to principles of environmental protection policy. However, the fundamental principle of this new Convention is still the obligation to prevent and eliminate pollution discharges in the Baltic in order to preserve the natural environmental balance of the Sea, and to apply the "polluter-pays" principle.

2. **1976 Mediterranean Convention (Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona)); adopted 16 February 1976, in force on 12 February 1978. The 1995 amendment to the Convention is not yet in force.**

The objective is to protect and enhance the marine environment of the Mediterranean area. Article 12 calls for Parties to cooperate in establishing

procedures for the determination of liability and compensation for damage resulting from the pollution of the marine environment deriving from violations of this Convention. The 1995 amendment to this Convention is not yet in force, but Article 12 remains the same in the Amendment.

3. **1992 Black Sea Convention (Convention on the Protection of the Black Sea Against Pollution (Burcharest)); adopted 21 April 1992, in force on 15 January 1994.**

This Convention aims at the preserving the marine environment of the Black Sea and the protection of its living resources against pollution. Article XVI calls for Parties to adopt rules and regulations on the liability for damage to the marine environment, and to ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation for damage caused by pollution. It also states that Parties should cooperate in developing and harmonizing their laws relating to liability, assessment and compensation in order to ensure the highest degree of deterrence and protection for the Black Sea environment.

4. **1992 North-East Atlantic Convention (Convention for the Protection of the Marine Environment of the North-East Atlantic (Paris)); adopted 22 September 1992, but not yet in force.**

The objective is to provide for the coordinated protection of the North-east Atlantic environment. Although there are no express provisions on liability and compensation in the Convention, under States' general obligations in Article 2, the Contracting Parties are to take all necessary steps to prevent marine pollution and to restore marine areas which have been adversely affected. This section also outlines that Parties shall apply both the precautionary principle and the polluter pays principle, as well as the best available technologies in implementing the Convention.

5.2.3 Other Regional Conventions

1. **1991 Bamako Convention (Convention on the Ban of Import into Africa and the Control of the Transboundary Movement and Management of Hazardous Wastes within Africa (Bamako)); adopted 30 January 1991, in force on 20 March 1996.**

The objective of this Convention is to protect the human health of the African population and the environment against the adverse effects which may result from the generation of hazardous wastes.

The Convention promotes the adoption of precautionary approach to pollution problems, and Article 12 mandates the creation of an *ad hoc* expert organ to prepare a draft protocol setting out appropriate rules and procedures in the field of liability and compensation resulting from the transboundary movement of hazardous wastes.

2. ***1991 Antarctic Protocol (Protocol on Environmental Protection to the Antarctic Treaty (Madrid))***; adopted 3 October 1991, but not yet in force.

The aim of this Protocol is to reaffirm the status of Antarctica as a special conservation area, and to enhance the framework for the protection of the Antarctic environment with its dependent and associated ecosystems. In article 16, the Parties undertake to elaborate rules and procedures relating to liability for damage arising from activities taking place in the Antarctic Treaty Area and covered by this Protocol. Once compiled, those rules and procedures will be included in annexes under the Protocol.

6. DRAFT AGREEMENTS ADDRESSING SPECIFICALLY LIABILITY AND COMPENSATION ISSUES

1. *International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law (Prevention of Transboundary Damage from Hazardous Activities)*; commenced 19 December 1977.
3. *Draft Directive of the European Commission on Environmental Liability with Regard to Prevention and Restoration of Environmental Damage*

This draft codification by the International Law Commission (ILC) deals with the concept of prevention of significant transboundary harm from hazardous activities. The draft apply to activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences.

The draft defines "harm" to include, among others, the environment; and "transboundary harm" to be harm caused in the territory of or in other places under the jurisdiction or control of a state other than a state of origin, whether or not the States concerned share a common border. It further calls upon States of origin to take all appropriate measures including environmental impact assessment to prevent, or to minimize the risk of significant transboundary harm. In order to achieve an equitable balance of interests, States concerned will be obliged to take into account all relevant factors and circumstances, including, *inter alia*, the risk of significant harm to the environment and the availability of means of preventing such harm, or minimizing the risk or restoring the environment.

The ILC placed the topic of liability on its agenda in 1978. It decided at its 23rd session to recommend to the General Assembly the elaboration of a convention by the Assembly on the basis of the draft articles on prevention of Transboundary harm from hazardous activities.

2. *Draft Financial Limits of the Liability under the 1999 Basel Protocol (Legal Working Group of the Basel Convention, 22 June 2001 and January 2002).*

This Working Group seeks to examine the limits of liability set out in Annex B of the 1999 Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal. In particular, this Group is addressing the appropriateness of the liability limits applied to the types of Basel wastes and concerns that the limits applied to low hazard wastes may be too high and that some shipments may become uninsurable. The advice of the Working Group is that the extension of existing insurances for notifiers will be sufficient to cover liability since the norm is that notifiers will already have broad liability insurances to limits at or greater than the minimum limits dictated by the Protocol.

In fulfillment of its commitment made in the White Paper of 2000 on environmental liability, the European Commission is preparing and has issued a proposal on environmental liability with regard to the prevention and restoration of environmental damage. The document is expected to be finalized and adopted by 2003.

The proposal aims to establish a framework based on environmental liability whereby environmental damage would be prevented or restored. It defines environmental damage relevant EC provisions of reference to environmental law such as biodiversity, soil, habitats, water and potential or actual harm to human health when the source of the threat to human health is land contamination etc. The Directive will apply to environmental and biodiversity damage caused by the operation of any of the occupational activities. It shall, however, not apply to environmental damage arising from an incident in respect of which liability or compensation is regulated by existing UNECE agreements and, as necessary amended. It will also oblige the operator to take preventive measures to avoid occurrence of an environmental damage. Where an environmental damage has already occurred, the operator will be required to take necessary restorative measures. The competent authority will be required to recover from the operator and initiate cost recovery proceedings against the operator who has caused damage within a period of five years from the date on which the preventive or restorative measures have been carried out.

However, it leaves open to the member States to decide when measures should be taken either by an operator or competent authorities or third parties. Similarly, institutional and procedural arrangements on the modalities to achieve results have to a large extent been left to the member States in line with the subsidiarity and proportionality principles. In accordance with the polluter pays principle, the operator is held either strictly liable or liable if he is at fault for environmental damage caused by activities listed in the Annex.

The proposal provides for appropriate provisions regarding transboundary damage, financial security in terms of adequate financial insurance for potential damage. Its relationship with national law, reviewing the regime and temporal application of the regime.

It also proposes an assessment of the gravity and extent of the damage and modalities for the determination of appropriate restorative measures. Modalities to recover the restoration costs from the liable operators on the basis of the polluter pay principle are equally made.

The proposal underscores the importance of the specific role for community intervention or community action to prevent and restore environmental damage. The Proposal does not, however, cover traditional damage (personal injury and damage to goods). It does not also make it mandatory or compulsory for the operator to have financial security though encourages them to have it.

4. *Liability and Redress Regime under Stockholm Convention on Persistent Organic Pollutants (POPs)*

The Stockholm Convention has been developed as a result of a global recognition of the need to reduce and eliminate the release of a certain category of hazardous chemicals, persistent organic chemicals (POPs) into the environment. POPs are chemically substances that persist, bioaccumulate and pose a risk of causing adverse effects to human health and the environment. The Stockholm Convention was adopted on 22 May 2001 but still awaiting its entry into force after receipt of fifty instruments of ratification or accession.

The Stockholm Convention does not provide or call for the development of liability and redress regime. However, concern for the need for compensation for damage associated with POPs necessitated already debates on liability and redress regime within the context of the Convention. At the fifth session of the Intergovernmental Negotiating Committee (INC-5) held in December 2000, a proposal emerged that a

new article be incorporated into the Convention providing for the development in future of specific guidelines regarding liability, responsibility and compensation. Consequently, a resolution on liability and redress on the use and intentional introduction into the environment of POPs was adopted during the Stockholm Convention's Conference of Plenipotentiaries held in May 2001. The Resolution (Resolution 4) was adopted as a part of a package consisting of seven resolutions attached to the Final Act of the Conference. Resolution 4 recognized that the time is appropriate for further discussions on the need for elaboration of international rules in the field of liability and redress resulting from the production, use and international release into the environment of POPs. The Resolution also invited governments and relevant international organizations to provide the POPs Secretariat with information on national, regional and international measures and agreements on liability and redress, particularly those related to POPs. It further invited the Secretariat, in cooperation with one or more States, to organize a workshop on liability and redress in the context of the Stockholm Convention, and decided that the report of this workshop would be considered at its first COP with a view to deciding what further action should be taken.

In this respect and at the willingness of the Government of Austria to host, a workshop on liability and redress was organized and held in Vienna, Austria in September 2002. The workshop initiated the process to consider the possible need for a liability and redress regime for damages associated with POPs in the contexts of the Stockholm Convention, and to provide input to the first COP to the Convention.

The process for the development of liability and redress regime under the Stockholm Convention has thus began and will continue to be deliberated upon.

7. COMMON FEATURES & TRENDS

7.1 Rationale for developing liability and compensation regimes

Environmental concerns arising from the increasing activities that entail risks of environmental damage with transboundary and global detrimental impacts have prompted the international community to address the issue of liability and compensation for environmental damage.¹¹³ As stated in the definition section, environmental liability is the way and the means of forcing polluters to repair the damage that they have caused, or to pay for those repairs. To this extent, environmental liability is a fundamental expression of the polluter-pays principle.¹¹⁴

Although the imposition of liability and compensation regimes is by no means an environmental policy cure-all, liability rules do serve a variety of useful purposes. They may, for example, serve as an economic instrument providing an incentive to avoid environmental damage. In certain areas, it may also encourage prevention which may not be covered by existing means, and can close loopholes. In other words, liability rules provide a technique for internalizing environmental and other social costs into production processes and other activities in implementation of the polluter-pays principle.¹¹⁵ It follows that responsibility and liability for environmental damage should not be regarded as a negative sanction, but rather, as a positive inducement to prevention, deterrence, restoration or compensation as the case may be.¹¹⁶

7.2 Scope of application

According to international practice, three types of civil liability seem to emerge which could be the subject of environmental liability and compensation regimes. They are, namely: state liability for

environmental damage; private international liability for environmental damage, and purely domestic civil liability for environmental damage. In general, the current network of conventions and protocols are limited to addressing transboundary effects,¹¹⁷ industrial and transportation accidents,¹¹⁸ or hazardous or dangerous activities.¹¹⁹ Our summary shows that there are no global or regional agreements that deal with damage caused during normal operations. This represents a major gap in liability in the current network of agreements. Furthermore, currently only *the 1993 Lugano Convention*¹²⁰ refers to impacts both within and outside of the jurisdiction of the Contracting Party (transboundary and non-transboundary effects) and this Convention is not in force.

In the preparation of environmental regimes the definition of which activities might engage liability becomes an important question. The essential point will be of course to identify which activities can be considered dangerous or hazardous from the environmental point of view, and which will be subject to the strict standard of liability. One approach is to identify specific sectors or hazardous activities. Some national legislation has targeted, for example, chemical and plastic processing and manufacturing, and the generation of power and heat.¹²¹ A similar approach is followed by some international regimes for specific activities identified as dangerous, hazardous or ultra-hazardous, such as oil pollution and nuclear energy.¹²² A different approach is to include hazardous activities in general and providing basic criteria for listing dangerous substances, as is the case with *the 1993 Lugano Convention* which includes a non-exhaustive list of dangerous activities. Still another approach is to consider hazardous all activities taking place in a given sensitive area, as suggested for the annex on liability to *the 1991 Antarctic Protocol*.

¹¹³ Vicuna, *supra* note 7.

¹¹⁴ European Environmental Bureau, *supra* note 5.

¹¹⁵ European Environmental Bureau, *supra* note 5.

¹¹⁶ Vicuna, *supra* note 5.

¹¹⁷ 1999 Basel Protocol, art. 3; 1992 UN/ECE Watercourse Convention art. 1,2.

¹¹⁸ 1960 Paris Convention, art. 1,3; 1963 Vienna Convention, art I(j)(k), II; 1969 CLC and 1992 CLC, art. 2; 1992 UN/ECE Industrial Accidents Convention, art. 2.

¹¹⁹ 1989 CRTD, art. 3; 1993 Lugano, art. 2(2); 1996 HNS, art. 4(1).

¹²⁰ *See* art. 3.

¹²¹ *See* Denmark's 1994 Compensation for Environmental Damage Act.

¹²² *See generally* 1960 Paris, 1963 Vienna, 1969 CLC, 1971 FUND.

7.3 Definition of damage

The complexity of issues involved in liability and compensation for environmental damage are further compounded by the fact that damage, a key concept in international environmental law, has not lent itself to an authoritative general definition. What is clear is that environmental damage does not include damage to persons or to property, or "traditional" forms of damage. Therefore, environmental damage, if listed at all, is listed as a separate head of damage from traditional damage, with the costs expressed in terms of measures of reinstatement of the impaired environment.¹²³

That being said, a general observation based on the chronology of the agreements reveals that many of the earlier agreements only consider damage in terms of property and health (or traditional damage) and exclude environmental damage all together. *The 1963 Vienna Convention* is such an example.¹²⁴ *The 1997 Protocol* to amend this Convention and extend the definition of nuclear damage to include environmental damage is not yet in force. Also in *the 1972 Convention on Space Objects*, the definition of damage is similarly limited to loss of life, personal injury, impairment of health, and damage to property.¹²⁵ The expansion in the definition of damage to include *pure* environmental damage separately from any human injury or loss roughly coincides with *the 1992 United Nations Conference on Environment and Development*. Conventions developed after this date, such *the 1993 Lugano Convention, 1996 HNS, and 1999 Basel Protocol*, all include similar definitions of damage. There are of course, some exceptions to this trend.¹²⁶

In discussing environmental damage, it is also important to mention that the terms "pollution"¹²⁷ and "adverse effects"¹²⁸ help in determining the threshold beyond which environmental damage might trigger liability, but they do not actually define it.

To date, *the 1999 White Paper on Environmental Liability* is the only regime to include explicit mention of damage to biodiversity, albeit in a rather limited way. And at present, none of the surveyed European jurisdictions, except Italy, recognizes the concept of "natural resource damages" in such a way as *the 1993 Lugano Convention, U.S.A.'s CERCLA or Nigeria's draft bill RECLEL* do (as a separate head of damage). However, in all countries, restoration and clean-up costs are recoverable.

In the case law, environmental damage in the pure sense was not considered in the *Trail Smelter Case*, although the *Lac Lanoux Arbitration* implicitly recognized environmental damage when it referred to changes in the composition, temperature or to other characteristics of the water of the River Carol which injured Spanish interests. In the *Patmos Case*, the Italian Court of Appeal took a broad approach to defining environmental damage as "everything which alters, causes deterioration in or destroys the environment in whole or in part" when dealing with marine pollution. In general, courts seem comfortable treating environmental damage as a separate head is recognized in the claim by Australia and New Zealand in the *Nuclear Tests Cases*, and by Hungary against Slovakia in its Original Claim in the *Gabcikovo-Nagymaros Case*.

7.4 Threshold at which environmental damage entails liability

A number of civil liability instruments establish thresholds for environmental damage or adverse effects which are "significant,"¹²⁹ "serious,"¹³⁰ or above "tolerable levels."¹³¹ Similarly in the case law, the tribunal in the *Trail Smelter Case* held that the injury must have "serious consequence" to justify a claim. In either instance, this approach provides for a *de minimis* rule which allows for the discarding of tolerated, minor or transitory damage, and only

¹²³ 1989 CRTD, art. 10(c),(d); 1993 Lugano, art. 2(7)(c),(d); 1996 HNS, art. 1(6)(c),(d); 1997 Vienna Protocol, art. I(k)(iv),(v),(vi),(m),(n),(o); 1999 Basel Protocol, art. 2(2)(c)(iii),(iv),(v); For national legislation see Italian law 349/1986, U.S.A.'s 1980 CERCLA and 1990 OPA, Nigeria's 1999 draft bill RECLEL.

¹²⁴ See art. 1(k).

¹²⁵ See art. 1(a).

¹²⁶ Such as the 1989 CRTD which pre-dated the Rio Declaration in 1992.

¹²⁷ 1982 UNCLOS, art. 1(4); see also Kenya's Environmental Management and Coordination Act, 1999.

¹²⁸ 1992 UNECE Watercourse Convention, art. 1(2).

¹²⁹ 1992 UNECE Watercourse Convention, art. 1(2).

¹³⁰ 1992 UNECE Industrial Accidents Convention, art. 1(d).

¹³¹ 1993 Lugano Convention, art. 8(d).

includes the damage above the defined threshold or significance. The justification for excluding minor impacts from the definition of damage and hence from liability is based on the fact that the cost of evaluating small impacts might exceed its benefits.¹³² A different approach altogether is to allow for an exemption from liability for damage that is “insignificant”¹³³ or “negligible.”¹³⁴ This approach may entail an important shift in the burden of proof since the evidence to justify the exemption will have to be provided by the operator and not by the claimant.¹³⁵ Instruments that deal with environmental damage by allowing clean-up and restoration costs, on the other hand, have been able to avoid the threshold issue altogether by evaluating each response project on its technical merits (1992 CLC/Fund). This approach facilitates the implementation of technically reasonable measures without the need for first proving some level of ecological “significance”.

Overall, these cases and conventions demonstrate that currently there is no general consensus or consistency at an international level as to the level of damage required to incur liability. This is, therefore, another area that requires clarification and consideration by nations in developing and implementing effective regimes relating to compensation and liability.

7.5 Persons Liable or Channeling Liability

The question as to which actor should be made responsible for damage is the cornerstone of an effective liability regime. In most conventions, the “operator” or “owner” is liable. This is consistent with the polluter-pays principle, in that it internalizes the costs of environmental damage and thus gives incentive to the person carrying out the risky activity to take preventive steps to reduce the risk of damage. In most cases, the liability is channeled to the operator or owner which means that they are the only

person liable, although separate actions against the insurers are also often permitted.¹³⁶

The definition of an operator varies depending on the convention. For instance, *the 1993 Lugano Convention* defines an operator as the person who exercises the control over a dangerous activity,¹³⁷ while in *the 1992 UNECE Industrial Accidents Convention* it is the person in charge of the activity.¹³⁸ In contrast, *the 1963 Vienna Convention* expressly includes a person and/or State in the definition of an operator of a nuclear installation.¹³⁹

In conventions dealing with oil pollution and the marine environment, liability is expressly focused on the shipowner.¹⁴⁰ In *the 1989 CRTD*, the owner of the vehicle transporting the goods is liable, since he/she is presumed to be in control of the use of the vehicle. However, liability is imposed on the carrier if the owner is clearly not in control of the vehicle.¹⁴¹ Only in *the 1999 Basel Protocol* is the notifier liable, that is, until the disposer takes possession of the wastes.¹⁴²

Overall, *the U.S.A.’s CERCLA* has the broadest scope for imposing liability. Under the Act, “potentially responsible parties” (or PRPs) include: current owners and operators of a facility, owners and operators of a facility at the time the hazardous substances were disposed of, persons arranging for transport and disposal of hazardous substances, and transporters of hazardous substances. The classification of PRPs is also used in *Nigeria’s draft RECLEC bill*.

7.6 Burden of proof/type of liability

The options for imposing liability include fault liability (based upon intention or negligence), strict liability (prima facie responsibility with defenses available), or absolute liability (responsibility with no mode of exculpation). The distinction between imposing absolute or strict liability is usually based on a distinction between ultra-hazardous activities (such as nuclear incidents, and civil liability for space

¹³² Vicuna, *supra* note 7.

¹³³ 1963 Vienna Convention, art. 1(2).

¹³⁴ 1988 CRAMRA, art (1)(15).

¹³⁵ Vicuna, *supra* note 7.

¹³⁶ See for example 1963 Vienna Convention, art. 2(7).

¹³⁷ See art. 2(5).

¹³⁸ See art. 1(e).

¹³⁹ See art. 1(a),(c).

¹⁴⁰ 1969 CLC, art. 3(1); 1996 HNS, art. 7(1).

¹⁴¹ See art. 5(1) (2) and 6(1).

¹⁴² See art.4 (1-4).

objects) and other activities. In general, almost all of the current regimes impose strict liability. From a law and economics perspective, this type of liability creates an incentive for operators of potentially harmful activities to avoid environmentally unsound economic action and to internalize the costs of damage to the environment in the running of their business. It also eases the burden on the potential plaintiff to establish a nexus between the activity and the damage caused.¹⁴³ Fault-based approaches and absolute liability have become more exceptional expressions, albeit by no means unimportant. The only exceptions to adhering to the strict liability regime are *the nuclear conventions (1960 Paris and 1963 Vienna) and 1972 Space Objects Convention* which impose absolute liability,¹⁴⁴ and *the 1999 White Paper and 1999 Basel Protocol* that provide for fault-based liability in certain limited circumstances.¹⁴⁵

In some cases operators, owners and other parties will be jointly or severally liable.¹⁴⁶ This means that the plaintiff can bring an action against either all or only one of the perpetrators of the damage. This not only provides the person bringing forth the claim with the option to seek out the perpetrator with the deepest pockets, but also means that the accused party bears the financial risk if the other perpetrators do not have enough money to pay their share of the compensation. In any case, joint and several liability weakens the link between diligence in operation and payment of liability, thus weakening the incentive mechanism of the polluter pays principle.

It should also be noted that current regimes only address civil liability for compensation, and not state liability. The exceptions being *the 1972 Space Objects Convention and 1988 CRAMRA* which expressly hold States liable for damage. State liability is implicit in *the 1963 Vienna Convention* which defines "persons" to include both individuals and/or States. Furthermore, the International Law Commission (ILC) has been engaged in drafting a comprehensive convention on State liability since 1978, which is not yet completed. From this, it is clear that there has been more than a general reluctance on the part of States to accept any form of responsibility for environmental damage. In general, this problem may relate to the extent to which States can be held responsible for damage resulting from activities of private parties or private industry. According to traditional international law, States are normally not directly responsible for such activities unless it is

established that they were obliged to control dangerous activities within the scope of their sovereign control, and that they failed to do so.¹⁴⁷

Overall, the area of State liability remains a large gap in the current regimes dealing with liability and compensation. This is an area that deserves attention since there may be instances where compensation may not be obtained, or obtained in full, from the operator especially in instances where the liability of the operator cannot be established or when the operator's liability is limited. In these circumstances, it seems that the victims must bear the loss themselves, or at least part of it, especially if private industry has not established a fund to disperse costs. In order to further enhance the protection of victims, it should be considered whether States should be held liable on a residual basis to remedy deficiencies of the civil liability regimes as an alternative or further tier of compensation beyond that of the private industry. Given the complexity of many environmental regimes, States cannot realistically expect that the whole burden of liability might fall upon private operators or other entities. It is likely that an interrelationship will continue to develop between systems of State and civil liability, combining their complementary participation in given international regimes. Ideally, these systems should operate simultaneously and should be considered as complementary, with the State taking the subsidiary or residual role by contributing to international funds.¹⁴⁸ This is an option that deserves further consideration and exploration by the international community.

7.7 Access to justice

An important aspect for the proper operation of an environmental regime is to provide access by States, international organizations and individuals to formal and informal mechanisms of dispute resolution. Under international law, a direct legal interest is required for the affected party to be entitled to make an environmental claim and demand the termination of an activity causing damage.¹⁴⁹ However, this poses a problem when the resulting damage is *pure* environmental damage, entailing damage to an animal or plant species or to the air or water. It is a further problem if the owner himself is the perpetrator because there may be no suitable person to bring forth a claim.

¹⁴³ Vicuna, *supra* note 7.

¹⁴⁴ 1960 Paris Convention, art. 3; 1963 Vienna Convention, art. IV; 1972 Space Objects Convention, art. II.

¹⁴⁵ 1999 Basel Protocol, art. 5.

¹⁴⁶ 1989 CRTD, art. 5(3); 1993 Lugano, art. 6(2); 1996 HNS, art. 8(1).

¹⁴⁷ Gehring & Jachtenfuchs, *supra* note 15.

¹⁴⁸ Vicuna, *supra* note 7.

¹⁴⁹ Vicuna, *supra* note 7.

Some solutions to these issues have been devised under domestic law. In *the U.S.A. under CERCLA and OPA*, public trustees are designated to act on behalf of the public interest to recover for natural resource damages. Claims for personal injury, damage to private property, or commercial losses, on the other hand, are handled in the standard civil system. The advantages of the public trustee system with integrated public review and comment are (1) that it allows government to undertake one of its standard roles, that of protecting the public interest, and (2) that it allows for the creation of agencies with the high level of technical expertise necessary to undertake meaningful restoration planning and implementation.

Even where it is not possible to designate a trustee to represent the collective interest, other solutions may be explored. For instance, there is a push for the right to class actions which would allow environmental organizations and other non-owners to bring forward an action. The need for class actions is stressed due to the fact that access to justice is often hampered by unaffordable costs and the fact that there is often no one to represent the rights of the environment. Enhancing access to justice may mean granting *locus standi* to environmental organizations or other persons with sufficient interests in the damage so that they may bring forth the claim on behalf of the environment. This issue is touched on in *the 1998 Aarhus Convention*, in article 9 where, within the framework of national legislation, Parties are to ensure that members of the public having "a sufficient interest" have access to justice.

A recent and comprehensive approach to this issue has been enacted by the Governing Council of the United Nations Compensation Commission, an approach which could be useful for environmental damages. Under this arrangement governments may submit consolidated claims and receive payments on behalf of individuals affected, including claims on behalf of third parties.¹⁵⁰ The Commission itself may

also intervene as a trustee on behalf of certain categories of claimants.¹⁵¹

Aside from issues of standing, access to justice also denotes the expeditious and equal access to domestic courts and remedies on a non-discriminatory basis. Clauses addressing these issues are included in a number of Conventions,¹⁵² and are specifically addressed in *the 1998 Aarhus Convention*.

7.8 Available defenses or exemptions from liability

Typical defenses include natural disasters or acts of God, which are often qualified as natural phenomenon of "exceptional, inevitable or irresistible character,"¹⁵³ and war or hostilities.¹⁵⁴ These defenses were initially permitted because it used to be difficult, if not impossible, to obtain insurance from harm caused by an act of God, or the use of force. Whether or not we should continue to allow such exceptions will largely depend on whether or not the insurance industry is capable of and/or willing to cover such risks.¹⁵⁵

Intentional or grossly negligent acts or omissions of a third party are also a common type of exemption from liability under international conventions.¹⁵⁶ A number of other situations have also been included on occasion as exemptions. For instance *the 1993 Lugano Convention*, as well as the 2002 EC Proposed Directive, exempt from liability damage resulting from compliance with a specific order or compulsory measure of a public authority,¹⁵⁷ damage caused by pollution at tolerable levels under local relevant circumstances, and damage caused by a dangerous activity taken lawfully in the interests of the person who suffered the damage.¹⁵⁸

Lastly, it should also be stressed that if strict liability is used as the applicable standard (as is usually the case), the absence of intent or culpability does not constitute an exemption.¹⁵⁹

¹⁵⁰ UNCC, Criteria for Expedited Processing of Urgent Claims, U.N. Doc. S/AC.216/1991/1, Aug. 2, 1991.

¹⁵¹ *Ibid.* UN. Doc S/AC.26/1991/5, Oct. 23, 1991.

¹⁵² See for example 1999 Basel Protocol, art. 8(1).

¹⁵³ 1963 Vienna Convention, art. IV(3)(b); 1969 CLC, art. III(2)(a); 1977 Seabed Mineral Resources, art. 3(3); 1988 CRAMRA, art. 8(4); 1989 CRTD, art. 5(4)(a); 1993 Lugano, art. 8(a); 1996 HNS, art. 7(2)(a); 1999 Basel Protocol, art. 4(5)(b).

¹⁵⁴ 1963 Vienna Convention, art. IV(3)(a); 1969 CLC, art. III(2)(a); 1971 FUND, art. 4(2)(a); 1977 Seabed Mineral Resources, art. 3(3); 1988 CRAMRA, art. 8(4); 1989 CRTD, art. 5(4)(a); 1993 Lugano, art. 8(a); 1996 HNS, art. 7(2)(a); 1999 Basel Protocol, art. 4(5)(a); also note that war and hostilities usually also includes armed conflict, civil war and insurrection.

¹⁵⁵ Lefeber, *supra* note 4 at 281.

¹⁵⁶ 1969 CLC, art. 3(2)(b); 1989 CRTD, art. 5(4)(b); 1993 Lugano, art. 8(b); 1996 HNS, art. 7(2)(b); 1999 Basel Protocol, art. 4(5)(d).

¹⁵⁷ See art. 8(c); see also 1999 Basel Protocol, art. 4(5)(c).

¹⁵⁸ 1993 Lugano Convention, art. 8(d),(e).

¹⁵⁹ Vicuna, *supra* note 7.

7.9 Financial limitations of liability

Most conventions, especially those that have created additional funds, have caps on the amount of compensation payable for a particular incident. Since most regimes are based on strict liability and thus do not require proof of fault, there is a need to provide a framework for legal certainty. The reasoning is that if strict liability is left open-ended this may open the floodgates for unlimited monetary claims resulting in serious financial burdens, excessive costs and the discouragement of investments or economic efficiency.¹⁶⁰ This need for legal certainty and economic considerations has been resolved by establishing a cap on the amount of compensation available in most regimes. The unit of account used is usually the Special Drawing Right (SDR) which is set by the International Monetary Fund. For instance, the 1996 HNS Convention is set at 250 million SDR, with a maximum limit on the shipowner of 100 million SDR (the rest is then supplemented by the HNS fund).¹⁶¹

Under the 1992 CLC the maximum ship owner's liability currently ranges between approximately 3 and 59.7 million SDR, depending on ship tonnage. Through the use of tacit amendment procedures, these limits have been raised by approximately 50% with effect 1 November 2003. The 1976 LLMC sets limits in amount based on ship tonnage.¹⁶² In the 1977 Seabed Mineral Resources Convention, the operator's liability is limited to 30 million SDRs, unless the damage is caused by a deliberate act, then the limit is abolished.¹⁶³ The nuclear conventions likewise have limits on liability. The 1997 Vienna Protocol (not yet in force) raises the possible limit of an operator's to not less than 300 million SDRs, and the supplementary fund caps the total amount of liability at 600 million SDRs.¹⁶⁴ It should be noted that a general condition is that the operator cannot avail itself of a limitation of liability if the harm is caused by an act or omission of the operator done with intent to cause harm, or due to reckless conduct of which the operator could have known that damage would probably result.¹⁶⁵

The conventions above which establish a Fund to supplement the amount of compensation payable by the operator's or owner's insurance can greatly increase the available amount of compensation

funds.¹⁶⁶ In such cases the Fund will pick up where the liability of operators ends thus ensuring the full payment of compensation. In this way, full compensation is provided with a predictable financial commitment of each tier or segment.

Overall, it may be impossible to establish a single ceiling for financial responsibility for all types of environmental damage, since the magnitude of the harm will depend on the nature of the activity which has caused the harm. For example, activities involving nuclear materials have the potential to pose incalculable risks for compensation claims, whereas the potential for damage resulting from the transport of hazardous material may be more localized. In this sense, a sector-by-sector approach may still be required with respect to financial limitations of liability.¹⁶⁷

7.10 Time limitations

Most conventions also have limitation periods in place to relieve the burden on operators or owners from having stale claims hanging over them years after the damage was caused. The overall length of time for these periods is, again, variable. For instance, for the 1999 Basel Protocol claims must be brought within 10 years from the date of the incident and within 5 years from the date the claimant knew or ought to have reasonably known of the damage.¹⁶⁸ Similarly, for the 1993 Lugano Convention, actions must be brought within 3 years from the date on which the claimant knew or ought reasonably to have known of the damage and of the identity of the operator. This Convention also sets an ultimate limitation period of 30 years in which to bring forth an action.¹⁶⁹ The 1977 Seabed Mineral Resources Convention, liability extends for 5 years after abandonment of the installation.¹⁷⁰ In contrast, the 1972 Space Objects Convention has one of the shortest time periods in which to bring forth a claim; claims must be brought within one year following the date of the occurrence.¹⁷¹

The nuclear conventions have a time limit of 10 years, however, the 1997 Protocol to Vienna Convention (not yet in force) extends the period during which claims may be brought for loss of life and personal injury to 30 years.¹⁷² Furthermore, with the nuclear

¹⁶⁰ Vicuna, *supra* note 7.

¹⁶¹ See art. 9.

¹⁶² See art. 6.

¹⁶³ See art. 6.

¹⁶⁴ 1997 Vienna Protocol, art. V; 1997 CSC, art. IV.

¹⁶⁵ 1969 CLC, art. V(2); 1977 Seabed Mineral Resources, art. 6(4); 1989 CRTD, art. 10(1); 1996 HNS, art. 9(2).

¹⁶⁶ Vicuna, *supra* note 7.

¹⁶⁷ Lefeber, *supra* note 4 at 285.

¹⁶⁸ See art. 13(1),(2).

¹⁶⁹ See art. 17(1),(2).

¹⁷⁰ See art. 3(4).

¹⁷¹ See art. X(1).

¹⁷² 1997 Vienna Protocol, art. VI(1)(a).

conventions, states have an option to shorten the limitation periods to periods of not less than 3 years (for the 1963 Vienna Convention), and not less than 2 years (for 1960 Paris Convention) from the date the claimant knew or ought to have known of the damage and that the operator was liable.

Although there is no uniform time limit, it appears from existing and proposed international agreements that liability does not extend beyond 30 years after the harmful event. It should be stressed that this time period is distinct from the period during which a victim should be permitted to bring a claim after the discovery of the harm and the identification of the source of the harm. With respect to this time limit, the consensus seems to exist that this should be a period of three years.¹⁷³ The only exceptions being the 1977 Seabed Mineral Resources Convention (only 12 months), the 1960 Paris Convention (2 years), and the 1999 Basel Protocol (5 years).¹⁷⁴

7.11 Financial security

To be able to cover the risk of liability, most civil liability regimes require the operator to establish financial security,¹⁷⁵ and this is most commonly done by purchasing insurance. The chief advantage of a compulsory insurance regime is the certainty that is provided that victims will receive compensation, even if the operator is undercapitalized or becomes bankrupt. An objection to having a regime based on compulsory insurance is that this could reduce the incentive for potential perpetrators to avoid causing damage, a situation known as 'moral hazard'. A potential problem may be that insurers will shy away from general, compulsory insurances for every potential type of environmental damage. To counteract this effect, insurance companies may demand upper limit premiums and/or significant damage in order to restrict their own financial risk.

7.12 Creation of funds

Funds are a reasonable way of topping up insurance. They provide an additional tier of protection beyond that of the operator or shipowner for compensating victims or remedying damage which might not otherwise be covered by a liability system. These schemes have been developed and proposed to compensate victims: (1) if the operator cannot be held

liable due to exonerations, contributory negligence, time limits or financial limits; (2) if the operator is financially incapable to meet his liability up to the financial limit; (3) if the total amount of harm exceeds the financial limit; and/or (4) to provide relief on an interim basis. Contribution mechanisms for the funds typically target the sector, industry or government, that benefits most from the hazardous activity. Such funds are commonly found in regimes pertaining to nuclear safety [1997 CSC], oil pollution [1971 and 1992 FUND Conventions], and transport [1996 HNS]. The 1997 CSC provides for a third tier of compensation, based on contributions from Contracting Parties. The 1992 Fund is currently in the process of creating a third tier of compensation for countries desiring even more coverage than is presently available. There are no provisions related to the establishment of funds in the 1972 Space Objects Convention, 1989 CRTD, 1993 Lugano Convention, or the 1999 Basel Protocol, although in the case of the Basel Protocol there are on going informal negotiations on this issue.

7.13 Jurisdiction

This refers to where a claim for compensation may be brought. International regimes generally provide the criteria to establish jurisdiction in cases involving multinational aspects. For instance, the jurisdiction for the Nuclear conventions is vested in the domestic (national) courts of the State where the incident has occurred,¹⁷⁶ whereas for 1969 CLC and 1996 HNS authority is vested in the domestic courts of the affected state.¹⁷⁷ The 1989 CRTD, 1993 Lugano Convention, and 1999 Basel Protocol offer a choice between the courts of the state where the pollution occurred or those of the affected state.¹⁷⁸ Issues in this area that need further clarification include: the international jurisdiction of courts, the reciprocal recognition and enforcement of judgments of courts or tribunals, and an expeditious procedure for securing the enforcement of judgements and court settlements. Questions of concurrent jurisdiction and forum-shopping should also be taken into account in this context in order to prevent abuse.¹⁷⁹

7.14 Reparation for damage

In environmental damage cases, the victim is likely to seek financial reparation to cover a variety of costs

¹⁷³ 1969 CLC, 1989 CRTD, 1993 Lugano, 1996 HNS

¹⁷⁴ 1977 Seabed Mineral Resources, art. 10; 1960 Paris Convention, art. 8; 1999 Basel Protocol, art. 13(2).

¹⁷⁵ 1960 Paris, art. 10(a); 1969 CLC, art. VII(1); 1977 Seabed Mineral Resources, art. 8(1); 1989 CRTD, art. 13(1); 1993 Lugano, art. 12; 1996 HNS, art. 12(1); 1999 Basel Protocol, art. 14(1).

¹⁷⁶ 1960 Paris, art. 13(a); 1963 Vienna, art. XI(1); see also 1977 Seabed Mineral Resources Convention, art. 11(1).

¹⁷⁷ 1969 CLC as amended by the 1992 Protocol, art. IX(1); 1996 HNS, art. 38(1).

¹⁷⁸ 1989 CRTD, art. 19(1); 1993 Lugano, art. 19; 1999 Basel Protocol, art. 8.

¹⁷⁹ Vicuna, *supra* note 7.

arising from the material damage to environmental resources. These may include lost income or costs related to emergency response, clean-up, impact studies, restoration, or monitoring. Problems arise with the concept of pure environmental damage, however, because it does not fit easily with the traditional approaches of civil liability. These are designed to compensate an injured person by requiring the responsible person to pay the economic costs of resulting damage. Pure environmental damage, on the other hand, may be incapable of calculation in economic terms. An accepted solution to this problem is to link liability for harm to the environment to the payment of the reasonable costs of restoration measures, reinstatement measures or preventative measures [1989 CRTD, art. 10 (c), (d); 1993 Lugano, Art. 2 (7) (c), (d); 1996 HNS, art. 1 (6) (c),(d); 1997 Vienna Protocol, Art. I (k) (iv), (v), (vi), (m), (n), (o); 1999 Basel Protocol, Art. 2 (2) (c) (iii), (iv), (v)].

The result of this approach of limiting compensation to "reasonable" restoration measures that can actually be carried out and are therefore quantified is that the operator may be exposed to less liability the fewer the number of available, feasible measures. In cases where few restoration measures are available the question arises whether the operator can be required to pay some other form of compensation for harm to the environment. Determining the adequate level of payment remains the main stumbling block in such situations.

On occasions, however, damage will be irreparable because of physical, technical or economic reasons and, therefore, restoration will be impossible. An argument can be made that if environmental damage is irreparable or unquantifiable should not result in an exemption from compensation. Accordingly, an entity which causes environmental damage of an irreparable nature should not end up in a more favorable condition than if the damages were restorable. (Strasbourg resolution, Art. 25). One way to avoid such a distortion of incentives would be to see to it that polluters pay compensation equal to the value of the damaged resource. In cases that involve environmental resources that are traded in a market the approach is straight-forward: simply use the price that the environmental resource commands in the market (*Trail Smelter Case*). For some environmental resources the approach taken has been to estimate the economic value attached to the non-market use of the resources, for example,

recreational use. This is usually attempted using travel costs methods (relying on expenditures made by an individual to visit and enjoy a resource), or a hedonic pricing method (which takes the extra market value enjoyed by private property with certain environmental amenities). For the pure environmental damages themselves the only methods theoretically available are the highly controversial 'contingent valuation methods'. These use public opinion surveys to estimate value by measuring the willingness of individuals to pay for environmental goods such as clean air or water or the preservation of endangered. It should be pointed out, however, that these methods, first proposed in US environmental law, are far from developed and, to date have not been successfully used in US courts to determine environmental damages. While there is some debate among experts as to their future potential, most economists agree that public survey methods are very expensive, time consuming and require high-level experts in order to implement.

In most cases full reparation of environmental damage should not result in the assessment of excessive, exorbitant, exemplary or punitive damages. Punitive damages are not usually accepted under international law, but where it would be equitable for compensation to exceed actual loss or some other alternative measurement, punitive damages might be envisaged. Deliberate environmental damage might be a case in point.

7.15 Synopsis

In sum, it appears that civil liability regimes have a dual purpose. First, they provide for substantive minimum standards that enhance the effectiveness of legal remedies available to victims to obtain prompt, adequate, and effective compensation. These substantive minimum standards are: (1) the introduction of strict liability as the standard of liability; (2) the channeling of the liability to the operator so that he/she cannot evade liability; and (3) the establishment and maintenance of financial security to cover the liability. Second, civil liability regimes provide for limitations to liability to protect the viability of activities covered by these regimes. The limitations are: (1) the application to certain specified activities; (2) defenses or exemptions to liability; (3) financial limitations on liability; and (4) limitations of liability in time.¹⁸⁰

¹⁸⁰ Lebefer, *supra* note 4 at 297.

In general, liability and compensation regimes:

- cover damage caused by accidents, or by activities recognized as dangerous or hazardous; normal operations are generally not covered,
- have a geographical scope that is transboundary,
- cover traditional damage and environmental damage,
- provide for strict liability,
- channel liability to the operators or owners,
- hold operators or owners jointly and severally liable,
- provide for exoneration in cases of war, natural disasters, and contributory fault,
- place financial limits on liability,
- limit the time in which a claim can be brought forward,
- require insurance coverage and permit direct action against the insurer, and
- make available a second tier of funds (above the liability of the carrier).

8. GAPS AND PROPOSALS FOR ACTION

8.1 Gaps in the current network of liability and compensation

Based on the overall assessment of this study, the following recommendations are made to strengthen the current network of agreements on civil liability and compensation and to make new agreements effective in their environmental objectives:

1. There is a need to widen the scope of liability and compensation coverage, possibly into the following areas: damage with non-transboundary effects, damage derived from normal operations, and damage from low-risk activities and substances.
2. There is a need to look at present conventions and regimes and assess such questions as: (a) why states have been reluctant to address "state liability", (b) if there is scope to add liability and compensation to the Regional Seas Agreements, and, most importantly, (c) why so few agreements have entered into force.
3. In order to maximise potential for success in future regimes there is a need to study the various features of any liability and compensation regime, including: inclusion of compensation for restoration costs and preventive measures, efficient linkage with economic instruments, access to justice and information, liability defences, time limitations, jurisdiction, as well as liability thresholds and limits.
4. There is a need to study available options for the development of possible tools, including options for non-binding or legally binding instruments, within the framework of UNEP, and some of which have been considered by the EU, including:
 - Using international legal instruments in force which are of relevance to civil liability for environmental damage.
 - Evaluating the relevant agreements already in force and considering whether they should be amended to address questions of civil liability for environmental damage.
 - Promoting the entry into force of existing international agreements containing provisions which already cover civil liability for environmental damage, and identifying

the reasons why they have not yet entered into force. The possibility of adjustments or amendments might be considered.

- Developing a new international agreement (treaty/protocol) providing for civil liability for environmental damage.
- Developing a code of conduct, guidelines or recommendations concerning liability for environmental damage.

Based on the overall assessment of the Study, the following gaps in the current network of agreements on civil liability and compensation have been identified:

1. Transport via pipelines does not seem to be specifically covered, apart from the general provisions in *the 1993 Lugano Convention* (which is not yet in force), and this needs to be addressed.
2. State liability is imposed in *the 1972 Space Objects Convention* and it is referred to in *the 1988 CRAMRA* and is an area where further development is needed. Added to this, the fact that *the 1978 ILC draft* addressing state liability has not yet been completed illustrates the general reluctance on the part of States to shoulder what they see as the responsibility of private industry or individuals.
3. There is currently only one regional agreement that addresses land-based sources of pollution, so accordingly there is a need to further develop the GPA in line with the Regional Seas Conventions to address issues of civil liability.
4. There is little substance in the Regional Seas Agreements with respect to liability and compensation. Most of these Conventions merely refer to incorporating existing rules of civil liability into the existing conventions and do not lay out any substantive provisions on civil or State liability for environmental damage.
5. In agreements where environmental damage is not included, restoration costs and preventative measures should be added as a separate category from traditional damage. Specifically, this recommendation pertains to the older agreements that have either not yet been updated to include environmental damage, or the Protocol or amendment to the convention is not yet in force.

6. In all cases, liability and compensation regimes must be linked with economic instruments (such as mandatory insurance coverage or the creation of funds) in order to effectively implement the polluter pays principle.
7. In all cases, agreements must include provisions that ensure access to justice. This may mean broadening standing rights to encompass non-governmental organizations or "interested persons" who could bring forth a claim for compensation on behalf of the environment.
8. Exonerations such as acts of God, war and compliance with an order from a public authority should be further elaborated and reconsidered.
9. There are overlaps and inconsistencies with regards to limitations in time and amount for most conventions. Some consensus should be reached at least with respect to the time limits for bringing forth a claim for compensation. Financial limits still may have to be determined on a sector-by-sector approach.
10. Likewise, there are inconsistencies with respect to jurisdiction. Consistency at an international level or regional level is needed to effectively coordinate governance issues at the national level.
11. Consistent definitions of damage, thresholds for determining liability, and methods of calculating reparation for environmental damage must be established.
12. All possible efforts should be made to analyze why so many agreements have not yet entered into force and what could be done to encourage countries to become parties to these conventions.

In considering the options above, it is felt that options 1 and 2 are not really practical since the current congestion of agreements have already resulted in an uncoordinated and piecemeal network that inadequately addresses the issues of liability and compensation. Thus, pursuing these options will not remedy the problem or fill the existing gaps in the current regime. Option 3 is indicative of a larger trend occurring in international law, namely, the plethora of multilateral environmental agreements (MEAs) that have not yet entered into force due to the general reluctance of states to proceed with signing and ratifying these conventions. A quick examination of these conventions indicates that the reluctance of states to develop liability regimes, in particular state liability regimes, is widespread and is not easily remedied. In fact, the proliferation of MEAs has placed the entire system of environmental

governance structures under strain. This, coupled with inadequate political and financial support has also contributed to the lack of coherence. Furthermore, there may be little utility in implementing treaties dated from the 1970s and 80s since they will be out of date with contemporary issues and needs, specifically with respect to monetary amounts pertaining to financial security and funds.

It is felt that both options 4 and 5 are plausible alternatives to promoting a comprehensive integrated approach to environmental damage. Although option 4 may also be problematic, in that the creation of another treaty would simply add to the over congestion of MEAs currently clogging the international arena. Moreover, given of the general reluctance of states to ratify existing treaties there is the added concern that this new treaty would also fall under the same spell of dormancy, never being implemented or ratified. Furthermore, it also seems that the occurrence of serious accidents is necessary to give an impetus to the liability debate, such as the running aground of *the Torrey Canyon* in 1967, the *Amoco Cadiz* incident in 1978, or the *Chernobyl* accident of 1986. Following *the Torrey Canyon* incident, several conventions were adopted including *the 1969 CLC* and the associated *1971 FUND Conventions*. These conventions were subsequently amended after the *Amoco Cadiz* incident. In the aftermath of *Chernobyl*, a working group convened to study aspects of liability for nuclear damage that concentrated on improving the existing civil liability regimes for nuclear damage. The result was *the 1997 CSC* which is not yet in force.

Overall, option 5 may be the best option for the simple reason that it will be the most effective and practical way to guide nations in enacting national legislation or regional agreements on liability and compensation. The strength of this option is that it focuses first on domestic measures, (which, as mentioned, are rarely implemented under MEAs), and at the same time provides an umbrella framework to promote some level of consistency among domestic regimes. Assuming that this option was chosen to be pursued by UNEP, it is suggested that such an instrument include provisions on the following areas: (1) scope of application; (2) definitions (especially for terms such as environmental damage); (3) attribution of liability and exemptions; (4) enforcement of liability; (5) insurance and financial guarantees; and (6) compensation funds.

This type of regime could also address another important issue: whether liability and compensation should eventually be assessed under one single and comprehensive international regime covering a variety of activities or by separate regimes geared specifically to the realities and needs of major

individual sectors of activity. The latter option has been favored under international law thus far, providing for negotiated regimes on a sector-by-sector approach. National legislation, on the other hand, has tended to rely more on the first approach, providing where necessary specific rules for individual types of activities.¹⁸¹ The global reach of environmental problems will no doubt continue to build pressure on the need to undertake comprehensive solutions and regimes. However, for the time being it is likely that international law will keep with the sectoral approach. In addition to the difficulties inherent in the negotiation of liability schemes, there is one important reason that explains the sectoral trend. Effective liability often requires different levels of stringency, limits, exemptions and other characteristics in relation to the specific nature of the activity in question in order to accomplish its preventative function and to ensure the appropriate reparation of damage. This is also true of the need to ensure an adequate balance between the stringency of liability and economic efficiency, which will differ from sector to sector.¹⁸² Overall, it is felt that the development of general guidelines would be conducive to this sectoral approach.

8.2 Recommendations for action

Based on the overall assessment of this study, the following recommendations are made to strengthen the current network of agreements on civil liability and compensation and to make new agreements effective in their environmental objectives:

1. There is a need to widen the scope of liability and compensation coverage, possibly into the following areas: damage with non-transboundary effects, damage derived from normal operations, and damage from low-risk activities and substances.
2. There is a need to look at present conventions and regimes and assess such questions as: (a) why states have been reluctant to address "state liability", (b) whether there is scope to

add liability and compensation to the Regional Seas Agreements, and, most importantly, (c) why so few agreements have entered into force.

3. In order to maximise potential for success in future regimes there is a need to study the various features of any liability and compensation regime, including: inclusion of compensation for restoration costs and preventive measures, efficient linkage with economic instruments, access to justice and information, liability defences, time limitations, jurisdiction, as well as liability thresholds and limits.
4. There is a need to study available options for the development of possible tools, including options for non-binding or legally binding instruments, within the framework of UNEP, and some of which have been considered by the EU, including:
 - Using international legal instruments in force which are of relevance to civil liability for environmental damage.
 - Evaluating the relevant agreements already in force and considering whether they should be amended to address questions of civil liability for environmental damage.
 - Promoting the entry into force of existing international agreements containing provisions which already cover civil liability for environmental damage, and identifying the reasons why they have not yet entered into force. The possibility of adjustments or amendments might be considered.
 - Developing a new international agreement (treaty/protocol) providing for civil liability for environmental damage.
 - Developing a code of conduct, guidelines or recommendations concerning liability for environmental damage.

¹⁸¹ Vicuna, *supra* note 7.

9. EXPERTS GROUP MEETING HELD AT GENEVA, 13-15 MAY 2002

9.1 Experts review of the analysis made

A select group of experts, meeting in their personal capacities, convened by UNEP and Geneva in May 2002 thoroughly reviewed and discussed this paper. Experts identified priority issues and gaps, which UNEP should focus on its future work. They also made specific recommendations for activities to be evaluated and assessed to determine the best possible course of action for UNEP to deal with the subject matter.

9.2 Issues and Gaps Identified

The issues and gaps identified for future work include:-

A. Introduction

- Environment to be protected
- Types of damage to the environment
- Types of activities damaging the environment
- Role of liability and compensation in the broader effort to protect the environment
 - (i) Emphasize need for prevention
 - (ii) Articulate best practices

A. Nature and scope of environmental liability

2. Definitional Aspects
3. Recognition of Environmental Damage
 - Types of damage to the environment

Threshold at which Environmental Damage Entails Liability

Issues of Proof

- Types of proof
- Amount of proof
- Elements to be proved in a normal damage situation

Types of Liability

- Absolute Liability

- Strict Liability
 - Fault Liability
 - Tiered Liability
7. Persons Liable/Channelling Liability
 8. Causation
 - General Causation
 - Specific Causation
 9. Available Defences or Exemptions from Liability
 10. Financial Limitations of Liability
 - Financial Limitations of Liability
 - Performance Bonds
 - Financial Mechanism to Fill The Gaps Where No Liability Arises (Non Identifiable Polluters)
 11. Time Limitations
 12. Nature of application, including questions of retroactive and prospective applicability
- #### B. Financial Assurance and Supplemental Compensation
13. Insurance
 - Compulsory or optional
 - Secondary or direct action against insurers
 14. Funds
 - Scope
 - i. Backup for the primarily liability activity
 - ii. Compensation for areas not otherwise covered
 - Sources of funding: Environmental Taxation, charges, fines and other schemes
 - Procedures
 - Tiered Funds
 - Types of Compensation

15. Other Types of financial assurance (for example, Financial bonds)

B. Procedures for resolving claims

16. Access to Information/Discovery during Litigation

- Standing (Who can sue)
- Who Can Recover

17. The role of the judiciary

- Environmental courts and special chambers

18. Other mechanisms for settling and avoiding disputes

19. Jurisdiction

- *forum non conveniens* and other obstacles to jurisdiction

20. Remedies

- Damages
- Injunctions and other Preventive Measures
- Reinstatement and clean-up
- Compensation of Losses
- Reparation Measures
- Calculation of Damages

21. Enforcement of Judgement

22. Jurisdictional aspect of foreign judgements

23. Conflict of Laws

24. Effective Mechanism of Enforcing Liability Issues (environmental rights)

C. The nature of the regime

25. Legal Nature of Liability regime (International, Constitutional or Statutory)

D. Capacity building

26. Judiciary

27. Bar

- Pro bonos

28. NGOs

9.3 Recommendations for Future Course of Action

The Expert Group proposed and made recommendations for possible future course of action for UNEP to consider and further develop the field of environmental liability and compensation.

The recommendations promised include:

- (i) Develop guidelines, best practices or recommendations that otherwise facilitate the development and effective use of national and international environmental liability systems; and
- (ii) Develop capacity building programmes for public authorities including the judiciary (and where appropriate, the establishment of environmental courts and chambers), lawyers (litigating and defending), NGOs and other stakeholders, in particular, to promote and facilitate the use of national and international environmental liability;
- (iii) Promote research to enhance continued improvement of liability regimes including the identification of the reasons why some agreements covering environmental liability and compensation have not attracted wider State acceptance; and
- (iv) Develop new international agreement(s) on environmental liability and compensation.

10. BIBLIOGRAPHY

- American Re. *Survey of International Environmental Remediation Regulations*. A. Soler (ed). 1997.
- Church, T.W. & R.T. Nakamura. "Beyond Superfund: Hazardous Waste Cleanup in Europe and the United States." 1994. *Georgetown International Environmental Law Review* 7(1): 15-58.
- "Civil Liability: Agreement reached on new legally binding instrument." Press Release, Geneva, July 4, 2000 at www.unece.org/press/pr2001.
- "Declaration of Environment Year caps a success story in nature conservation." *Oman Observer* 14 December 2000.
- Dolden, E. "Environmental Law in British Columbia: A Primer for U.S. Insurers." 1997. *Insurance Report* at www.dwf-inlaw.com/publications/.
- Dolden, E. & R. Kischer. "CERCLA-Like Legislation" Effective in British Columbia on April 1, 1997." 1997. *Insurance Report* at www.dwf-inlaw.com/newsletters.
- Environmental Liability*. International Bar Association IBA Section on Business Law, 1991.
- European Environmental Bureau. *Environmental Liability in Europe: Concerning the need for a European Directive on Environmental Liability*. 1997. Ch 1. www.eeb.org/archive/liabilityuk.htm
- Evaluation of Project FP/GN/1100-98-11: Support to Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)*. United Nations Environment Programme. September 2000.
- Gehring, T. & M. Jachtenfuchs. "Liability for Transboundary Environmental Damage: Towards a General Liability Regime." 1999. *European Journal of International Law* 14(1):1-8.
- Gonzalez Marquez José Juan. *Liability for Environmental Damage in Restoration Problems Mexico*, UAM-Miquel Angel Porrúa, 2002, 350pp.
- Jacoby, D & A. Eremich. "Environmental Liability in the United States of America." In *Environmental Liability*. International Bar Association IBA Section on Business Law, 1991. p. 63 - 94.
- Jeffery, M.I. "Environmental Strategies for the 1990s: A Canadian Perspective." In *Environmental Liability*. International Bar Association IBA Section on Business Law, 1991. p. 95-112.
- Jones, P. "The Polluter-Pays Principle and the EC Proposal on Environmental Liability: Anything New for Protecting the Ecosystems of Europe's International Watercourses?" Center for Energy, Petroleum and Mineral Law and Policy (CEPMLP). Annual Review 2000, Article 9. www.dundee.ac.uk/cepmlp/car/html/car4_art9.htm.
- Kato, K. "The New Frontiers of Environmental Policy in Japan." In *Environmental Liability*. International Bar Association IBA Section on Business Law, 1991. p. 47-62.
- Lefebvre, R. *Transboundary Environmental Interference and the Origin of State Liability*. Kluwer Law International, 1996.
- Liability and Compensation for Environmental Damage: Compilation of Documents*. United Nations Environment Programme. Nairobi, 1998.
- Nnadozie, K. "Environmental Regulation of the Oil and Gas Industry in Nigeria." Unpublished.
- "Pacific Islands Counter Oil Spills." *Cook Island News*. October 4, 1999.
- "Report from the First Conference of the Parties to the UN/ECE Convention on the Transboundary Effects of Industrial Accidents: Responsibility and Liability." Annex II. (November 2000).
- Sands, P. "Liability for Environmental Damage." In *UNEP's New Way Forward: Environmental Law and Sustainable Development*. United Nations Environment Programme, 1995.
- Status of Regional Agreements Negotiated in the Framework of the Regional Seas Programme*. United Nations Environment Programme. Nairobi, 1994.
- The Making of a Framework: Environmental Law in Kenya*. United Nations Environment Programme. Nairobi, 2001.
- Truelsen, P.A. "Environmental Liability as an Instrument in Danish Environmental Law? 1998. at www.akf.dk/som/pdf/som32/struelsen.pdf
- UNCC, Criteria for Expedited Processing of Urgent Claims, U.N. Doc. S/AC.216/1991/1, Aug. 2, 1991.

www.unep.org

The Director
Division of Environmental Policy Implementation
United Nations Environment Programme
P.O. Box 30552, 00100
Nairobi, Kenya
Tel: 254 20 623507/623508
Fax: 254 20 623859/623917

Website: <http://www.unep.org/depi/implementationlaw.asp>

